# Elementary SSAT®
# 1,000+ Practice Questions
# Answer Keys & Explanations

Note: This answer key and the accompanying explanations apply to the 2024 edition of the workbook. If you are looking for answer key and explanations for the 2023 edition, please visit us at http://www.thetutorverse.com/books to submit a help ticket request. Please note that we are not able to support answer keys and explanations for earlier editions of the workbook.

# Table of Contents


3rd Grade Diagnostic Practice Test (Form A) ..... 4
Section 1 – Quantitative ..... 4
Section 2 – Verbal ..... 5
Section 3 – Reading ..... 7
Section 4 – Writing Sample ..... 10
Section 5 – "Experimental" ..... 10
4th Grade Diagnostic Practice Test (Form B) ..... 11
Section 1 – Quantitative ..... 11
Section 2 – Verbal ..... 13
Section 3 – Reading ..... 15
Section 4 – Writing Sample ..... 17
Section 5 – "Experimental" ..... 18
Quantitative Reasoning & Mathematics Achievement ..... 19
Number Concepts & Operations ..... 19
Place Value ..... 19
Basic Concepts ..... 19
Ordering Numbers and Fractions ..... 21
Fractions ..... 22
Arithmetic Word Problems ..... 24
Algebraic Principles ..... 25
Solving Equations and Inequalities ..... 25
Ratios and Proportions ..... 26
Geometry ..... 26
Shapes and Attributes ..... 26
Area and Perimeter ..... 27
Measurement ..... 28
Time and Money ..... 28
Unit Analysis ..... 30
Statistics & Probability ..... 31
Probability ..... 31
Mean ..... 32
Interpreting Tables and Graphs ..... 32
Verbal – Synonyms ..... 33
3rd Grade ..... 34
Introductory ..... 34
Intermediate ..... 35
Advanced ..... 36
4th Grade ..... 37
Introductory ..... 37
Intermediate ..... 38
Advanced ..... 39
Verbal – Analogies ..... 41
Guided Practice – Antonyms ..... 41
Guided Practice – Characteristic ..... 42
Guided Practice – Part to Whole ..... 42
Guided Practice – Uses ..... 43
Guided Practice – Users ..... 44
Guided Practice – Category ..... 45

Guided Practice – Product/Producer....46
Guided Practice – Degree....47
Guided Practice – Homonyms....48
Guided Practice – Synonyms....49
Mixed Practice....50
3rd Grade....50
4th Grade....50
Reading Comprehension....52
Fiction....52
3rd Grade....52
4th Grade....54
Non–Fiction....57
3rd Grade....57
4th Grade....59
3rd Grade Final Practice Test (Form C)....61
Section 1 – Quantitative....61
Section 2 – Verbal....63
Section 3 – Reading....65
Section 4 – Writing Sample....67
Section 5 – "Experimental"....67
4th Grade Final Practice Test (Form D)....68
Section 1 – Quantitative....68
Section 2 – Verbal....70
Section 3 – Reading....72
Section 4 – Writing Sample....75
Section 5 – "Experimental"....75

# 3rd Grade Diagnostic Practice Test (Form A)

## Section 1 – Quantitative

1. B. *Numbers – Ordering Numbers and Fractions.* When DENOMINATORS are EQUAL, the fraction with the LARGEST NUMERATOR has the LARGEST VALUE. Since 6 is the largest numerator, $\frac{6}{9}$ is the largest fraction.
2. A. *Statistics & Probability – Probability.* There are more regions labeled "A" than any of the other regions on the board. Therefore, the dart is most likely to land in a region labeled "A."
3. C. *Measurement – Time and Money.* There are 7 days in 1 week so "1 week and 4 days" is equal to 7 + 4 = 11 days. The rehearsal is 11 days after October 3 which is October 14 since 3 + 11 = 14.
4. D. *Numbers – Basic Concepts.* 5 goes into 18 three whole times since 5 × 3 = 15. Subtract to find the remainder: 18 – 15 = 3. So, 18 ÷ 5 = 3 R 3.
5. D. *Numbers – Arithmetic Word Problems.* There are 5 weekdays in a week (Monday – Friday). $3 per cup times 5 cups per week equals $15 total in one week. (In number sentence form: 3 × 5 = 15.)
6. B. *Statistics – Interpreting Tables and Bar Graphs.* The top of the "Mandarin" column lines up with the number 40 on the vertical axis.
7. D. *Statistics – Interpreting Tables and Bar Graphs.* The top of the "Spanish" column lines up with the number 60 on the vertical axis and the top of the "French" column lines with the number 50. Add to find the number of students who study Spanish or French: 60 + 50 = 110.
8. B. *Numbers – Basic Concepts.* In expanded form, 132 = 100 + 30 + 2 and 69 = 60 + 9. First, Add the ones: 2 + 9 = 11. Next, add the tens: 30 + 60 = 90. Last, add the hundreds: 100 + 0 = 100. Find the sum of the place values: 100 + 80 + 11 = 201.
9. D. *Measurement – Time and Money.* As a decimal, 376 cents = $3.76. Add to find the amount of money Cheryl has. When adding money, remember to line up the decimal points. $3.76 + $5.55 = $9.31.
10. C. *Geometry – Shapes and Attributes.* The only trait all these shapes have in common is that they have four sides. Therefore, they are all quadrilaterals.
11. E. *Measurement – Unit Analysis.* Since we are converting from yards to feet, or a LARGER unit to a SMALLER unit, MULTIPLY the number of yards by 3 to find the number of feet: 6 × 3 = 18 feet.
12. D. *Algebra – Ratios and Proportions.* 1 centimeter represents 250 meters. This means we can multiply the number of centimeters by 250 to find the number of meters. Since the street is 5 centimeters long, it is 5 × 250 = 1,250 meters long.
13. B. *Geometry – Shapes and Attributes.* This triangle has two equal sides. Therefore, it is an isosceles triangle.
14. C. *Statistics & Probability – Probability.* There are more orange candies than any other color. Therefore, it is most likely to be selected.
15. E. *Numbers – Fractions.* Add the amounts to find the total. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 10: $\frac{1}{2}+\frac{3}{5}=\frac{1\times5}{2\times5}+\frac{3\times2}{5\times2}$. This simplifies to $\frac{5}{10}+\frac{6}{10}=\frac{11}{10}=1\frac{1}{10}$.
16. E. *Numbers – Arithmetic Word Problems.* $48 total divided by $4 per cup equals 12 cups. (In number sentence form: 48 ÷ 4 = 12.)

17. B. *Statistics – Mean.* Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. The sum of all the temperatures is 210° and there are 5 cities. Divide to find the average: 210° ÷ 5 = 42°.
18. B. *Numbers – Fractions.* First, divide the numerator by the denominator: 22 ÷ 5 = 4 R 2. Then place the remainder above the denominator and add to the whole number: $4 + \frac{2}{5} = 4\frac{2}{5}$.
19. C. *Numbers – Arithmetic Word Problems.* 80 total hydrants divided by 4 hydrants per block equals 20 blocks. (In number sentence form: 80 ÷ 4 = 20.)
20. A. *Geometry – Area and Perimeter.* The base of the triangle is 2 units and the height is 6 units. Area = $\frac{1}{2}$ (2 units × 6 units) = $\frac{1}{2}$ (12 square units) = 6 square units.
21. B. *Numbers – Basic Concepts*. In expanded form, 854 = 800 + 50 + 4 and 673 = 600 + 70 + 3. First, subtract the ones: 4 – 3 = 1. Next, when we try to subtract the tens we get 50 – 70 which is not possible since 50 is smaller than 70. We must regroup 854 as 700 + 150 + 4. Now subtract the tens and we get 150 – 70 = 80. Last, subtract the hundreds to get 700 – 600 = 100. Find the sum of the place values: 100 + 80 + 1 = 181.
22. E. *Measurement – Time and Money.* Two hours after 3:40 p.m. is 5:40 p.m. Add another five minutes to find the end time of the movie: 5:40 p.m. + 5 minutes = 5:45 p.m.
23. C. *Numbers – Fractions.* When denominators are equal, add the numerators: $\frac{3}{4} + \frac{1}{4} = \frac{3+1}{4} = \frac{4}{4} = 1$.
24. B. *Numbers – Ordering Numbers and Fractions.* First, group the prices by dollar amount: \$0.75, \$0.50 and \$1.50, \$1.75, \$1.00. Then place them in order using the cents: \$0.50, \$0.75 and \$1.00, \$1.50, \$1.75. Match the prices with the food items: apple, popcorn, soda, ice cream cone, burger.
25. B. *Geometry – Area and Perimeter.* This shape can be split into three rectangles by extending the two middle vertical lines down to the base. The left-most and right-most rectangles both have dimensions 6 units by 2 units, so their areas are both equal to 6 × 2 = 12 square units. The middle rectangle along the bottom has dimensions (6 – 4) units by (10 – 2 – 2) units or 2 units by 6 units. Its area is 2 × 6 = 12 square units. The area of the entire shape is equal to the sum of the areas of the three rectangles: 12 + 12 + 12 = 36 square units.
26. D. *Numbers – Arithmetic Word Problems.* If Karen has 123 tadpoles, then Julie has 123 – 48 = 75 tadpoles, and Padma has 123 – 57 = 66 tadpoles. Add to find how many tadpoles they have altogether: 123 + 75 + 66 = 264.
27. B. *Numbers – Place Value.* With a 4 in the ones place, round down to the nearest tens place to get to 230.
28. D. *Numbers – Basic Concepts.* Twenty thousand is 20,000. Three hundred is 300. Fifty-four is 54. Add the values: 20,000 + 300 + 54 = 20,354.
29. E. *Numbers – Arithmetic Word Problems.* First, add the money she spent and the money left to get the amount she did not put into the bank: \$60 + \$50 = \$110. This represents half her money. To find the amount she received, double \$110: 2 × \$110 = \$220.
30. C. *Numbers – Fractions.* When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 30: $\frac{5}{6} - \frac{1}{5} = \frac{5\times5}{6\times5} - \frac{1\times6}{5\times6}$. This simplifies to $\frac{25}{30} - \frac{6}{30} = \frac{19}{30}$.

# Section 2 – Verbal

1. D. “Mane” means “hair.” Though it usually refers to the hair on a horse’s neck, a horse’s mane is only one part of the whole horse, so this is an incorrect analogy structure. While other animals (usually birds) have feathers, the word “feather” describes a very different anatomical feature.

2. C. “Recognize” means “to understand,” or “to know.” The prefix “re-” means “again,” the root word “cog” means “to know,” and the suffix “-ize” makes the word a verb, which makes “recognize” mean “to know something, or someone, again.” Though a person may recognize someone familiar, “familiar” is an adjective, not verb.
3. B. To “stumble” means to fall, or “trip.” We may get hurt when we stumble, but “hurt” does not mean the same thing as “stumble.” When we jump, we spring into the air, which makes “jump” an antonym.
4. D. To “burst” means to break open and out, or “erupt.” A bubble can burst, but “bubble” is a noun not a verb. “Collapse” describes an object falling upon itself, which is an antonym of “burst.”
5. A. “Different” means not the same, or “unlike” something else. The prefix “un-” means “not,” and the root word “like” means “same,” which makes the definition “not the same.” Not all things that are different are necessarily bizarre. “Similar” is an antonym.
6. B. To “occur” means “to take place,” or “happen.” Though associated, “event” is a noun, not a verb.
7. E. To be famous is to be well-known to many people. A genius is person known for being exceptionally smart, and a star is known for being gifted; but both are nouns referring to people rather than adjectives. “Unknown” is an antonym.
8. D. “Ridiculous” means “funny” or “silly.” Though associated, “clown” is a noun and not adjective. Being ridiculous does not necessarily imply being “rude,” or impolite.
9. C. “Cooperation” means people working together, or “teamwork.” Though a pair of partners must cooperate and interact, “partner” refers to a type of person rather than process, and “interact” is a verb rather than noun. “Argument” means to yell and fight, and is an antonym.
10. C. “Gift” means something given to another, or “present.” During a holiday, a family will celebrate an occasion and a gift may be given, but “holiday,” “family” and “celebrate” are associated words, and not synonyms.
11. A. “Tidy” means the same thing as “neat.” A spill will cause a mess, which is an antonym to “tidy.” Also, both “spill” and “mess” are nouns rather than verbs.
12. D. To be “aware” means having knowledge about thoughts and surroundings, or to be “conscious.” A person that is “guarded,” or protective, draws him or herself inward, so it is not a synonym. If a person is “ignorant” he or she will not be informed, which is an antonym of “aware.”
13. E. “Glide” means “to move smoothly through the air or water,” or “sail.” “Slippery,” or slick, is an adjective and not verb. “Launch” means “to take-off,” and is a more explosive motion than “glide.”
14. E. “March” means to move in a steady stride, or “walk.” Though a band will march, “band” is a noun, not verb. To “chase” means “to run quickly,” so it is an antonym.
15. B. “Boldly” means acting without fear, or “fearlessly.” The suffix “-ly” means “characteristic of,” and the root “bold” means “without fear,” which makes the definition “the characteristic of acting without fear.” Not all big things are bold, and “big” is an adjective, not adverb. To react weakly is to act ineffectively, so “weakly” is an antonym.
16. A. A janitor uses a mop, so this is a <u>users</u> analogy. Similarly, a potter uses clay. Though one must imagine to create a sketch, the user is not mentioned, so it is the incorrect analogy structure.
17. D. A banana is a type of fruit, which means this is a <u>category</u> analogy. Similarly, a pork is a type of meat. Pork comes from a hog, so this is not the correct analogy structure. Beef is another type of meat, but neither “beef” nor “pork” are words that describe a category.
18. B. “Gaze” is another word for “look,” so this is a <u>synonym</u> analogy. Similarly, “snooze” is another word for “doze,” or to nap. In all the other options, the word relationships are antonyms.

19. B. "Cheer" means feeling happy, which is the opposite of "discourage," making this an antonym analogy. Similarly, "break" and "repair" are also opposites. "Love" and "adore" are synonyms.
20. A. "Deer" is pronounced the same way as "dear," making this a homonyms analogy. Similarly, "whole" is pronounced the same way as "hole." "Whole" and "part" are antonyms, and "whole" and "mole" are rhyming words, not homonyms.
21. C. A square is a type of shape, which means this is a category analogy. Similarly, a pushup is a type of exercise. A sandal is a type of shoe, but the order is reversed from the original structure.
22. B. A goat can be a part of a herd, so this is a part/whole analogy. Similarly, a roof is a part of a shed. Though a roof is on top of a house, "top" is not the whole that the roof is a part of.
23. A. "Brilliant" is a more extreme version of smart, so this is a degree analogy. Similarly, a lake is more extreme, or larger form of a puddle. Though "genius" is a more extreme version of "intelligent," the order is reversed from the original structure.
24. E. Artwork may be described or characterized as "beautiful," so this is a characteristic analogy. Similarly, pillows are generally soft. Although the sky may be described as overcast, the order is reversed from the original structure.
25. D. A shovel is used to dig, so this is a uses analogy. Similarly, a stove is used to cook food. Though one may discard trash, the order is reversed from the original structure, and ditch and mound are antonyms.
26. D. A builder uses cement, so this is a users analogy. Similarly, a fisherman uses bait. Though an animal catches prey, "catch" is a verb, not noun describing a person.
27. B. A bulb is a part of a lamp, so this is a part/whole analogy. Similarly, a number is part of an equation. A worker is in a different position from a boss, but a worker is not a *part* of a boss. In all the other options, the order is reversed from the original structure.
28. E. A chef produces a banquet, so this is a product/producer analogy. Similarly, a toymaker produces a puppet. A hostess is characterized as welcoming, rather than producing it, so this is an incorrect analogy structure.
29. E. "Hare" is pronounced the same way as "hair," making this a homonyms analogy. Similarly, "grown" is pronounced the same way as "groan." Though words like "rabbit," "bunny," "curly," and "blonde" are associated with the question words, they are not related as homonyms.
30. D. "Dozen" is another word for "twelve," so this is a synonym analogy. Similarly, "elegant" is another word for "stylish." Though "elegant" can describe a lady, and "beauty" is usually a characteristic of an elegant person or object, neither are synonyms of "elegant."

# Section 3 – Reading

1. B. *Main Idea.* The passage tells how Pete Conrad, the third American moon walker, was not like other astronauts. He didn't like the tests they had to take (line 7), and he made lots of jokes (lines 9 and 12). The other options are all true, but they are all details from the passage, and do not summarize the entire text.
2. C. *Inference.* Unlike other astronauts, Conrad did not like the tests he had to take, and he made jokes about them (line 9). It sounded to some people like he was not serious about the job of being an astronaut. Although the passage mentions how tall Conrad was (line 16), it doesn't say he was too short to fly. There is nothing in the passage that says Conrad was not a good pilot. Though it is true that he disliked his space capsule, by then he was already chosen to be an astronaut.
3. A. *Detail*. Line 4 says, "He learned to fly airplanes while he was still in high school." Joining the Navy, going to college, and 1962 all occurred later.
4. C. *Vocabulary.* Conrad's dislike of tests and his jokes made some people think he might not be right for the astronaut program. "Chosen" would be redundant in the sentence, and line 5 also

says Conrad had been chosen for the program before he took the tests. Though "suitable" contains the word "suit," but in this passage, it doesn't have anything to do with dressing up. There's nothing in the passage that says Conrad wasn't properly trained to be an astronaut.

5. E. *Main Idea.* In the beginning the narrator was afraid to move (line 5), but by the end she realized her fears were unfounded (line 19). Therefore, she discovered that trying new things can more fun than expected. The narrator never complains about her little brother, nor does she warn her audience of airplane travel. The inside of an airplane is described, but that is merely a story detail, not the reason for writing.
6. D. *Vocabulary.* the narrator says that she can see "the world below turn slanted" (line 13). This means the plane is turning and flying on an angle briefly, making everything below look "sideways" to her. There is no evidence that the plane got "dark" or that it was nighttime outside. "Over," "circles" and "around" are unlikely – passenger planes do not make moves like this, unless there is something wrong.
7. B. *Detail.* In line 14, the narrator tells us that a lady in the plane asked them if they wanted "headphones, pillows and snacks." We can assume that is because she was giving them out to passengers. Therefore, they can be gotten on the plane. There is no evidence to support the other answer options.
8. C. *Inference.* The narrator giggles because she is finally getting excited about the trip: she now thinks flying in the air is "fun" (line 15), and she gets some neat things on the plane. Her stomachache is gone, but that is another symptom of her change in mood, not its cause. The narrator does not tell a joke, and the lady on the plane is described as "nice," not funny. There are TV screens on the plane, but the narrator does not mention watching anything on them.
9. B. *Main Idea.* The purpose of the passage is to persuade readers why "plays are better than movies" (line 2). While the author mentions aspects of movies and plays, the passage does not detail how they are made. Although the passage mentions actors and compares music in movies and plays, these are subordinate ideas. The passage also mostly focuses on how plays and movies are different.
10. C. *Vocabulary*. In the context of the passage, the word "performances" is referring to shows performed on stage. Sets and stages are pieces of these performances. Movies do not "change every night" (line 4). Although performances are live, the word is not synonymous with "alive."
11. C. *Inference.* The author argues that plays are good learning experiences because people "can also ask the actors questions" (line 15), which is an implied comparison with movies. Sets in movies are changed off-screen. People can hear music played in movies, and they are close to the screen. Movies tell the names of actors during the credits.
12. D. *Inference*. "Magic of the stage" is referring to the experience and wonder of watching a play live because the "sets and music are also more exciting in plays" (line 7). Performers do not necessarily do stunts on stage. The passage does not suggest there are secrets in plays (the switching of sets is easily visible rather than hidden), and the answer options "sorcery" and "spells" imply a literal reading of the metaphor, which would be incorrect.
13. B. *Main Idea.* The speaker plans to spend a day enjoying nature, and is looking forward to it with great anticipation (lines 1-2). While she is returning to her town at the end of the poem, the main focus of the poem is the rest of her day which she plans to spend admiring nature (lines 5-8). The plants she encounters are not in a garden, and she does not do any chores or fall asleep in the poem.
14. E. *Inference*. The speaker is thankful for the time she spends in nature: "I will be the gladdest thing/Under the sun!" (lines 1-2) She is active throughout the poem, so she is not tired or bored. Since there are no other characters in the poem, she is not particularly helpful or loyal.
15. B. *Inference.* "Quiet" can mean a lot of things in this context, and a good way to solve this question is to start with a process of elimination. The poem contains positive language and characterizes the speaker as happy, so we can rule out "dislike," "fear," and "sadness." That

leaves "respect" and "gratitude." Though the speaker is characterized as thankful in the poem, the word "quiet" is more associated with being respectful than being thankful. For example, you stay quiet in class to respect your peers and your teacher, and you stay quiet during a play to respect the actors and audience. So, the correct answer is "respect."

16. E. *Detail.* The speaker says she will "start down" (line 12) "when the lights begin to show" (line 9). The sun is up when the poem starts. Although the speaker appreciates the flowers, she does not pick them. The clouds and wind are shown earlier in the poem, and the speaker does not go home after she experiences either.
17. E. *Main Idea.* The passage is focused on the different ways people have volunteered throughout history, from how it started (lines 3-4) to modern times (line 24). The repeated use of dates is also a clue that this piece is about history. The passage indicates that volunteering is done for free (line 2). Although the passage explains that firefighters have been volunteers in the past and the Salvation Army collects clothes, these are details rather than the Main Idea. Even though the Peace Corps works in other countries, the author explains many different ways to volunteer in the U.S.
18. D. *Inference*. The passage states that many people did not have jobs and implies this is the reason soup kitchens opened in the 1930s (lines 16-17). Since soup kitchens gave away soup for free, the passage does not support the idea that soup is expensive. Although many people did not have jobs at the time, since volunteering is free, the volunteers were probably not trying to find work by helping in the soup kitchen. The passage does not make any claims about the popularity of soup, nor does it explain that the president asked people to help in soup kitchens.
19. B. *Detail.* The passage suggests that the Salvation Army does its work in the U.S., while the Peace Corps works in other countries (line 21). Both the Salvation Army and Peace Corps have volunteers who work for free and help needy people. It is the Salvation Army rather than the Peace Corps that collects money from people.
20. E. *Vocabulary*. In the context of the Red Cross' purpose, "disasters" could best be replaced with "emergencies," supported by the fact that many people it helps are injured (line 14). There is no mention of sickness with relation to the Red Cross. The passage does not give any indication that people would need help from the Red Cross due to journeys, gatherings, or arguments.
21. A. *Story Elements.* The main problem in the story is rescuing the dragon in time. The dragon is tied up by rope (lines 6-7) and there are wild animals trying to chase the dragon: "Hurry, the pig is coming over on the crocodiles, too. They're all coming over!" (lines 3-4). Even though the pig is mentioned, it is only a small part of the challenges that the father faces. The father is able to fly on the dragon's back (lines 15-16), so that is not the main problem either.
22. D. *Detail.* In line 13, the dragon raced around in circles right after the father finished cutting the rope. The dragon was celebrating its freedom and ability to fly again. The dragon was not trying to scare the other animals away, leave Wild Island, or convince the father to fly on its back.
23. C. *Inference*. The father is brave, or courageous, because he rescues the dragon even though there are terrifying wild animals chasing him. We can infer from the passage that it is dangerous to rescue the dragon, considering the dragon's fear and impatience (lines 2-4, and 10). Therefore, the father is not cowardly. Even though the father had some doubts, like if he could finish cutting the rope in time, he is not gloomy. It is the dragon who is excitable (line 14) rather than the father.
24. B. *Story Elements.* We can assume Wild Island is a fictional place because it includes mythical creatures, like dragons, talking. This passage is fiction. Though there are indeed wild animals, real islands may contain such species, and this does not prove that Wild Island is a made-up place. Similarly, the name Wild Island could be the name of a real island.
25. C. *Main Idea.* The author explains that bees are dying and then says "It is important to do what we can to help keep bees healthy" (lines 3-4). Then, the author reminds the reader that "we can save the bees" (line 14). the repetition of the main idea shows that the author wrote the passage

to persuade people to save bees. There is no mention of pollen being a healthy food, and the author states that bees are good for more than just making honey (lines 1-2). This is not a fiction story.

26. E. *Inference*. Lines 11-12 tells us that if the queen bee dies, the rest of the colony will, too. This suggests that she is very important to the health of the colony.
27. E. *Vocabulary.* The author mentions that the death of the queen bee can cause the "rest of the colony" to die (lines 11-12), so "colony" most likely means "group" of bees. The sentence refers to a group of bees rather than a single "bee," there is no "king" in a bee colony, and neither "food" nor "chemicals" make sense in this context of bees dying.
28. A. *Detail.* Lines 14-18 discuss ways to help bees, and planting a garden is one way to do this. A garden with flowers that bees are attracted to is even better, and the pansies, marigold and lavender are examples of these. Thus, it does not make sense that these would harm bees. The author also does not discuss putting the plants in a salad, or that they are beautiful, or act as natural pesticides.

# Section 4 – Writing Sample

Responses may vary. Have an experienced tutor or educator review the writing sample.

# Section 5 – "Experimental"

1. A. *Main Idea.* The author discusses the history of jazz, from the beginning of jazz in New Orleans in the 1800s (line 1-5) to the spread of jazz across America in the early 1900s (lines 9-12). While the role of jazz on the radio is discussed in the text (line 13), this is a detail that supports the overall main idea, which focuses on the complete history of jazz. The passage also does not discuss New Orleans' history beyond the development of jazz.
2. B. *Detail.* Prior to stating that people used music for comfort, the author writes: "It was also a place of natural disasters. Floods and diseases happened often" (lines 2-3), implying that these disasters were the cause. While music is described as "a symbol of the city's toughness" (line 4), it was only considered to be a symbol of toughness because of the previously-mentioned floods and diseases.
3. E. *Inference*. In the previous sentence, the passage states: "Buddy Bolden mixed musical styles there" (lines 6-7). We can thus infer that he played things in different combinations than was previously heard of. Also, in this case "sprinkle" means "to add," rather than a literal sprinkle of rain. Although jazz is played at a "very fast, light rhythm," this aspect of jazz is not discussed in the passage
4. B. *Vocabulary.* In order to have "Bolden's jazzy style spread throughout the nation" (line 9), people would have to be raving, or praising, it. Raving, however, is not the same as "blaring" (line 13), which means playing loudly or blasting.
5. C. *Detail.* According to the author, "In the early 1900s, many jazz musicians moved to the North" (lines 9-10). Jazz has its roots in the 1800s (line 1) and began blaring on the radio in the 1920s (line 13), but it moved to the North from New Orleans in the early 1900s.
6. E. *Inference.* In the last paragraph, it states that jazz "brought different races and cultures together" (lines 14-15). Though jazz did comfort people (lines 3-4), was invented in New Orleans in America (lines 4-5), was invented by Buddy Bolden (lines 6-8), and did spread all over the country (line 9), its most important contribution to American history was its ability to bring people together.
7. D. "Alert" means attentive, or "watchful." "Attention" is a noun, not an adjective. "Tired," or sleepy, is an antonym.
8. E. To "imitate" means to follow an original as a guide, or "copy." Though imitation results in something that is the same as the original, "same" is not a verb. To "fake" means to pretend to be the original, so it is not a synonym.

9. A. A "symbol" is something that represents another thing, or a "sign." A symbol can represent language, or specific words, but does not have to. A "division" is a rift or split, and is also not a synonym.
10. C. "Blur" means "fuzziness and distortion," which is the opposite of "focus," making this an antonym analogy. "Realistic" (an accurate representation) and "fantastic" are also opposites. All the other options are closely related to each other, and are not antonyms.
11. B. A cliff may be described, or characterized, as "steep," so this is a characteristic analogy. Similarly, snails are generally slow. Although a dolphin is typically playful, and a skyscraper can be tall, the order is reversed from the original structure.
12. B. A snowflake is a part of a blizzard, so this is a part/whole analogy. Similarly, a student is a part of a class. Icing is part of a cupcake, but the order is reversed from the original structure.
13. E. *Measurement – Time and Money.* There are 7 days in 1 week so there are 2 × 7 = 14 days in 2 weeks. We can find her deadline by adding to the start date: 19 + 14 = 33. Since there are only 28 days in February, any day over the 28th becomes a day in March: 33 – 28 = 5. Therefore, her project is due on March 5th.
14. D. *Geometry – Area and Perimeter.* Perimeter is calculated by adding all the side lengths of a closed shape. Since a square has four sides of equal length, perimeter = 14 + 14 + 14 + 14 = 56 inches.
15. D. *Statistics – Mean.* Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. Over the course of the week, Luna earned a total of $1.50 + $2.00 + $1.75 + $2.50 + $2.25 = $10. Divide to find the average: $10.00 ÷ 5 = $2.

# 4th Grade Diagnostic Practice Test (Form B)

## Section 1 – Quantitative

1. A. *Numbers – Place Value.* With a 4 in the hundreds place, round down to the nearest thousand to get to 6,000.
2. D. *Statistics & Probability – Probability.* There are six number less than 7 (1, 2, 3, 4, 5, and 6). There are only three numbers greater than 7 (8, 9, and 10). Since there are more numbers less than 7, the number on the paper has a bigger chance of having a number less than 7.
3. C. *Algebra – Ratios and Proportions.* To go from 9 to 36, we multiply by 4. Using this pattern, multiply 7 by 4 to get 28.
4. C. *Numbers – Arithmetic Word Problems.* Elias's 18 geodes times 4 equals 72 geodes. 72 geodes minus 6 geodes equals 66 geodes. (In number sentence form: 4 × 18 = 72 and 72 – 6 = 66.)
5. E. *Geometry – Area and Perimeter.* Replacing the area with 18 and the base with 3 gives us: $18 = \frac{1}{2}(3 \times \text{height})$. If 18 is half of (3 × height), then (3 × height) is double 18. So (3 × height) = 36. Therefore, the height must equal 12 units since 3 × 12 = 36.
6. C. *Statistics – Interpreting Tables and Bar Graphs.* The top of the "Tenor" column lines up with the number 8 on the vertical axis.
7. E. *Statistics – Interpreting Tables and Bar Graphs.* According to the graph, there are now 10 altos. If two leave, there will be 10 – 2 = 8 altos left. There are 15 sopranos. Subtract to find the difference: 15 – 8 = 7.
8. B. *Geometry – Shapes and Attributes.* Every square is a rectangle, but not every rectangle is a square. If the four sides do not all have the same measure, then it cannot be a square.
9. B. *Numbers – Basic Concepts.* On the left side of the equation, 88 + 8 = 96. In order for the equation to be balanced, we need the right side to also be equal to 96. We must therefore add 6 to 90.

10. C. *Measurement – Time and Money.* There are 7 days in 1 week so there are 2 × 7 = 14 days in 2 weeks. Therefore, "2 weeks and 5 days" equals 14 + 5 = 19 days. Adding 19 days to May 29 gives us 48. There are 31 days in May, so the party will take place 48 – 31 = 17 days into June which is June 17.
11. D. *Statistics – Mean.* Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. The total distance between Lisa's house and the restaurants is 336 yards and there are 6 restaurants. Divide to find the average: 336 yards ÷ 6 = 56 yards.
12. B. *Numbers – Fractions.* First, divide the numerator by the denominator: 25 ÷ 8 = 3 R 1. Then place the remainder above the denominator and add to the whole number: $3 + \frac{1}{8} = 3\frac{1}{8}$.
13. E. *Statistics & Probability – Probability.* Because the groups are chosen randomly, the new student would have an equal chance of being placed in any of the groups.
14. D. *Measurement – Unit Analysis*. There are 100 centimeters in 1 meter. Since we are converting from meters to centimeters, or a LARGER unit to a SMALLER unit, MULTIPLY the number of meters by 100 to find the number of centimeters: 3.4 × 100 = 340.
15. B. *Geometry – Shapes and Attributes*. Parallel lines are the same distance apart and will never touch or intersect.
16. A. *Numbers – Arithmetic Word Problems*. 118 artworks from I.M.A. plus 293 artworks from M.F.A. plus 184 artworks from M.S.D. equals 595 total artworks. (In number sentence form: 118 + 293 + 184 = 595.)
17. E. *Algebra – Equations and Inequalities*. First, find the value of *s*. Since 12 ÷ 4 = 3, *s* = 4. Then substitute this value into the second equation: 9 × 4 = 36.
18. C. *Statistics – Mean*. To find an average, add up all the numbers, then divide that sum by how many numbers are in the set. Here, the sum is 82 + 35 + 64 + 68 + 26 + 73 = 348. There are 6 numbers in the set, so 348 ÷ 6 = 58.
19. B. *Measurement – Unit Analysis*. There are 12 inches in 1 foot. Since we are converting from inches to feet, or a SMALLER unit to a LARGER unit, DIVIDE the number of inches by 12 to find the length of the sofa in feet: 72 ÷ 12 = 6 feet.
20. E. *Numbers – Ordering Numbers and Fractions*. First, compare the fractions that have the SAME NUMERATOR: $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, and $\frac{1}{6}$. The fraction with the SMALLEST DENOMINATOR has the LARGEST VALUE. Since 3 is the smallest denominator, $\frac{1}{3}$ is the largest fraction. Next compare $\frac{1}{3}$ with the remaining fraction, $\frac{2}{3}$. Since they have SAME DENOMINATOR, the fraction with the LARGER NUMERATOR has the LARGER VALUE. 2 > 1, so $\frac{2}{3} > \frac{1}{3}$. Therefore $\frac{2}{3}$ is the largest fraction.
21. D. *Numbers – Arithmetic Word Problems*. There are 2 shoes in a pair. 187 pairs of shoes times 2 shoes per pair equals 374 total shoes: 187 × 2 = 374.
22. A. *Measurement – Time and Money*. It takes Gina a total of 15 minutes + 25 minutes = 40 minutes to eat, wash, and dress. Therefore, she needs to wake up 40 minutes before 7:50 a.m. which is 7:10 a.m. since 50 – 40 = 10.
23. E. *Numbers – Fractions*. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator 12: $\frac{1}{4} + \frac{5}{6} + \frac{2}{3} = \frac{1 \times 3}{4 \times 3} + \frac{5 \times 2}{6 \times 2} + \frac{2 \times 4}{3 \times 4}$. This simplifies to $\frac{3}{12} + \frac{10}{12} + \frac{8}{12} = \frac{21}{12}$, or $1\frac{9}{12} = 1\frac{3}{4}$.
24. A. *Numbers – Arithmetic Word Problems*. 86 pretzels divided by 2 equals 43 pretzels. 43 pretzels minus the 27 pretzels Yuri gives to his brother equals 16 pretzels left. (In number sentence form: 86 ÷ 2 = 43 and 43 – 27 = 16.)

25. C. *Geometry – Area and Perimeter*. The perimeter of a square with side length $S$ is: perimeter = $S + S + S + S$ or perimeter = $4 \times S$. Replacing the perimeter with 64 centimeters gives us: $64 = 4 \times S$. To find S, divide 64 by 4: $S = 64 \div 4 = 16$ centimeters. The width of each rectangle will be 16 centimeters and the length will be 8 centimeters (half of 16 centimeters). Perimeter is calculated by adding all the side lengths of a closed shape: perimeter = 16 + 8 + 16 + 8 = 48 centimeters.
26. A. *Numbers – Ordering Numbers and Fractions*. Since the denominators are equal, focus on the numerators. The fraction with the largest numerator will have the greatest value and the fraction with the smallest numerator will have the least value. Since 9 > 7 > 5 > 3 > 1, then $\frac{9}{2} > \frac{7}{2} > \frac{5}{2} > \frac{3}{2} > \frac{1}{2}$.
27. C. *Algebra – Ratios and Proportions*. For every 1 teacher, there will be 3 students. This means we can multiply the number of teachers by 3 to get the number of students. Since there are 36 teachers, there are $36 \times 3 = 108$ students.
28. B. *Numbers – Basic Concepts.* In expanded form, 152 = 100 + 50 + 2 and 139 = 100 + 30 + 9. First, subtract the ones. However, when we try to subtract the ones we get 2 – 9 which is not possible since 2 is smaller than 9. We must regroup 152 as 100 + 40 + 12. Now we have 12 – 9 = 3. Next, subtract the tens and we get 40 – 30 = 10. Last, subtract the hundreds to get 100 – 100 = 0. Find the sum of the place values: 0 + 10 + 3 = 13.
29. B. *Numbers – Fractions*. Subtract the amounts to find how much of an hour is left. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 12: $\frac{3}{4} - \frac{1}{6} = \frac{3 \times 3}{4 \times 3} - \frac{1 \times 2}{6 \times 2}$. This simplifies to $\frac{9}{12} - \frac{2}{12} = \frac{7}{12}$.
30. C. *Algebra – Equations and Inequalities*. The whole numbers that are strictly greater than 5 AND strictly less than 9 are 6, 7, and 8. The only value that is an answer choice is 7.

# Section 2 – Verbal

1. B. “Vast” means enormous, or “huge.” We describe the sea, or a distance, as “vast,” but they are both nouns and not adjectives. “Compact” means "small,” which makes it an antonym of “vast.”
2. D. A “lantern” is a lamp, or “light.” A flame provides a light, but it is not a synonym.
3. A. “Fragile” means delicate, or “breakable.” The suffix “-able” means “given to” or “able,” so “breakable” means “able to be broken.” Not all objects which are “fancy” are necessarily fragile. “Tough,” or strong, is an antonym of “fragile.”
4. D. To “soar” means to move through the air above the ground, or “hover.” An airplane or eagle may “soar,” but those are nouns, not verbs. “Topple” means to fall or collapse, which is an antonym of “soar.”
5. C. “Instant” means prompt, or “immediate.” “Delay” describes a wait time, and “slow” is an antonym of “instant.”
6. B. “Aroma” means scent, or “smell.” Although coffee and perfume both have an aroma, they are associated words, and not synonyms.
7. E. “Organized” means well thought out, planned, or “ordered.” A drawer or closet may be organized, but “drawer” and “closet” are both nouns, not adjectives. “Messy,” or disorganized, is an antonym.
8. D. “Wonderful” means very good, or “awesome.” We admire things that are wonderful, but “admire” is a verb and not adjective. “Awful,” or terrible, is an antonym of “wonderful.”
9. E. To “demonstrate” means to make evident, or “show.” Someone can use a presentation to demonstrate, but “presentation” is a noun and not a verb. If someone directs, or instructs, another, that implies he or she has authority over another, whereas “demonstrate” can also be between peers.

10. B. “Hardship” means something that is tough to endure, or a “difficulty.” The suffix “-ship” means condition, and the root “hard” means tough, which makes “hardship” mean “a condition that is tough.” To be “poor” is only one type of hardship, and not a synonym. If something is “tough,” it is “solid,” but that is a quality not a condition.
11. B. A “beverage” is a liquid to be swallowed, or a “drink.” “Dinner” is an associated word, not synonym. “Food,” which is solid, or edible, is an antonym.
12. A. “Intense” means at a high degree, extreme, or “forceful.” Although intense feelings may be described as “passion,” it is a noun not an adjective. “Concerned,” or slightly worried, is not sufficiently extreme to be a synonym for “intense.”
13. E. “Miniature” means microscopic, or “tiny.” Not all toys are miniature, and “large” is an antonym.
14. A. “Poisonous” means harmful, destructive, or “toxic.” The suffix “-ous” means “full of, “which makes “poisonous” mean full of poison. Though it also ends with “-ous,” “enormous” means massive. And while something poisonous might be smelly, “smelly” is not a synonym of “poisonous.”
15. C. “Gracefully” means the same thing as “smoothly.” The root “grace” means “pleasing,” the suffix “-ful” means full, and the suffix “ly” usually indicates an adverb, so put together it means “moving with grace.” “Kindness” and “beauty” have positive connotations, but they are nouns and not adverbs. “Roughly,” or violently, and “angrily” have negative connotations, which make them the opposite of “gracefully.”
16. B. A hornet is part of a hive, making this a part/whole analogy. Similarly, a group of grapes is called a “bunch.” Though words like “seedless” and “violet” are associated with the question word, they are not related as parts to a whole.
17. E. “Rays” is pronounced the same way as “raise,” making this a homonyms analogy. Similarly, “waste” is pronounced the same way as “waist.” Though the word pairs “limp” to “blimp” and “shall” to “hall,” end the same, they are not related as homonyms but as rhymes.
18. D. “Hearty” is another word for “filling,” so this is a synonym analogy. Similarly, “destiny” is another word for “fate.” In all the other options, the word relationships are antonyms.
19. A. An artist creates, or produces, a painting, so this is a product/producer analogy. Similarly, an inventor produces a gadget. A butler wears, but does not produce, bowties.
20. C. A blanket is used to cover, so this is a uses analogy. Similarly, a compass is used to navigate. Though a compass can help when one is lost, and it can be used to tell someone the direction of East, neither word describes a compass’s use.
21. D. A lumberjack uses an axe, so this is a users analogy. Similarly, a gardener uses a wheelbarrow. Though a spy may use a wig, the order is reversed from the original structure.
22. C. “Derelict” means rundown, or “extremely shabby,” so this is a degree analogy. Similarly, “vital” means “extremely important.” “Momentary” is a synonym of “temporary,” and “dazzling” is a synonym of “brilliant;” in both analogy pairs, the words do not differ in degrees.
23. A. Uncle is a type of relative, so this is a category analogy. Similarly, a penny is a type of coin. Though “piggybank” and “savings” are both associated words, neither of them describes a category that “penny” belongs to.
24. B. A monkey may be characterized as “nimble,” so this is a characteristic analogy. Similarly, a keepsake is precious. A sloth is sluggish, but the order is reversed. “Chimp,” “ape” and “monkey” are synonyms, not characteristics.
25. D. “Eliminate,” or remove, is another word for “rid” (as in “get rid of”), so this is a synonym analogy. Similarly, “inside” is another word for “within.” “Outside,” and “exterior” are antonyms, not synonyms.
26. E. “Graceful” means “flexible and lively,” which is the opposite of “awkward,” so this is an antonym analogy. “Total,” or whole, and “partial” are also opposites. “Suspend” means to stop, and “catastrophe” means disaster, so they are synonyms and not antonyms.

27. D. A second is part of a minute, making this a part/whole analogy. Similarly, there are many pages in a magazine. Though "hiccup" and "cough" are related to the windpipe, they are not part of each other, and "pen" and "ink" are in the reversed order from the original structure.
28. A. A brain is used to think, so this is a uses analogy. Similarly, a model is used to represent. Though one may use a test to evaluate, and a ruler to measure, the order is reversed from the original structure.
29. E. A dress is a type of clothing, so this is a category analogy. Similarly, "fantasy" is a type of genre. Though "fuzzy" is a type of texture and cinnamon is a type of spice, both pairs have the order reversed from the original structure.
30. E. "Overjoyed" means "extremely happy," so this is a degree analogy. Similarly, "cruel" means "extremely unkind." Though "bully" and "enemy" are associated words, neither are more extreme versions of "unkind."

# Section 3 – Reading

1. B. *Main Idea.* The first stanza states that the rain is "beautiful" (lines 1 and 5), after the "dust and heat" (line 2), showing both that it was hot and dry before, and that the rain is a welcome change. The rain does not make the lanes narrower – it just rains upon the narrow lanes (line 4). Though the rain is strong, there is no mention of flooding.
2. D. *Detail.* Stanzas help organize poems into smaller, separate parts, and are usually signified by an empty line before and after. Lines 6-9 form a stanza. Though it has some similes in it – "Like the tramp of hoofs" (line 7) – the similes do not extend throughout the whole stanza. Epics and haikus are types of poems rather than a part.
3. E. *Vocabulary*. The word "hoofs" is referring to the hard parts of animals' feet. Thus, it makes sense that "tramp" also means "stomp," especially when one considers that the rain is clattering heavily on the roof (line 6). A tap would be too light, making it a less likely substitute verb than stomp.
4. D. *Detail.* The reference to a leopard hide is referring to the dry grass and grain (line 20) on the plain (line 19). The author is discussing what the landscape looks like *before* the rain and puddles fill the ground, during the prior dry spell, and how much that dry land "welcomes" the rain.
5. D. *Story Elements.* Jemima is described as being "in search of a convenient dry nesting place" (lines 6-7), which is her main problem. She remembers how to fly and finds a place to land early in the passage. The gentleman who she finds on the stump offers to help Jemima solve her problem of finding a place to nest, and is not someone she's trying to avoid.
6. A. *Vocabulary*. In the context of the passage, Jemima is gliding over the treetops. Since she was "over the treetops" (line 4), she could not have been climbing or arriving at the trees, nor would she have escaped the trees. Jemima never disappears during the story.
7. A. *Inference*. Because of the gentleman's tail, "black prick ears and sandy colored whiskers" (lines 10-11), the reader can infer he is a fox. Rangers, and children do not have tails, and ducks do not have visible ears or whiskers. Snakes do not have hands, and would not be able to fold up a newspaper.
8. E. *Detail.* The gentleman tells Jemima that he has a "sackful of feathers in my woodshed" (lines 22-23) that she can nest in. Jemima leaves the hilltop to find a nesting place. She flies over the trees to find a nesting place, and lands where there is no brushwood. Although she liked the stump, the gentleman tells her about another place to nest.
9. D. *Main Idea.* The passage mentions that arts can help children do better on test scores (line 4), win more math and science awards (lines 6-7) and read graphics better (lines 8-9) than children who do not study the arts. These statements all support the claim that practicing the arts can develop other skills. The author says that music is important for student development but does not state that it is more important than reading or math, or that teachers should be

able to sing. Though reading charts and graphs is mentioned, it is not described as the *most* important skill. The author also does not discuss how math memorization can affect artistic skill.

10. A. *Detail.* The author states that "young children who draw or paint have more control in their fingers" (lines 7-8), which would be advantageous in their overall development. It is not ever mentioned that arts programs yield top scores in schools, that they become actors or that they are better at reading text (though it is mentioned that they become better at reading graphs and charts, the answer option refers to text specifically). Though teamwork is mentioned, it is never directly stated that children learn about conflict resolution through arts education.
11. E. *Detail.* Paragraph 3 states that "group efforts like band, choir and theater teach teamwork…and build confidence" (lines 12-14). Though they are performed in front of an audience, this is not why they are mentioned. They are not clubs that every student can join; nor are they musical instruments. Some school may be getting rid of these, but that is not specifically mentioned and it is not why these activities are mentioned.
12. B. *Vocabulary*. The passage begins by stating that "More schools these days are getting rid of art and music classes. People believe that subjects like math and reading are more important" (lines 1-2). This suggests that "subjects" and "classes" are one and the same thing in this context. Although "lessons" and "tests" are school-related and can be discussed in relation to math and reading, none of these correctly identifies what math and reading are in school in this context. "Citizens" is an alternative definition of "subjects," but that is not how the word is being used in this context.
13. B. *Main Idea.* The passage gives many examples of disadvantages for winning the lottery: not getting all of it (line 5), high taxes (lines 7), and losing winnings (line 10). Instead of a great life, this passage shows the aspects that people would not want. There is no evidence in the passage that a lottery winner does not have to work. And although the passage implies winning the lottery can cause stress in relationships (line 13), it does not state that winners will necessarily lose friends.
14. D. *Detail.* In lines 5-9, the passage gives reasons for why lottery winners "do not get to keep all the money": winners have to pay a lot of taxes to the government (line 7), and they have to pay millions of dollars to get it all at once (lines 5-6). Though it takes a long time to receive the winnings, there is no mention of people dying before they can get their winnings. While it is true that they end up with half the money they won, this does not provide a reason why. The other answer options are not supported by the text.
15. E. *Detail.* The passage says that many lottery winners "spend their money buying more lottery tickets" (line 11). Even though some winners want to tear their ticket up (line 14), this is not the reason winners spend their money. Although family members might ask for money (lines 13-14), the passage doesn't mention that this is where they spend all their money. There is no mention in the text about winners making their dreams come true or donating their money to charity.
16. A. *Vocabulary*. The passage says that winning the lottery "might not be dreadful, but it also might not be good" (lines 15-16). The coordinating conjunction "but" implies that "dreadful" is the opposite of good, or "bad." Lottery winners might feel pleasant, happy, lucky or scared, but those options do not match the context of the sentence.
17. A. *Vocabulary.* The hyphen following the word "responsibility" in line 2 tells the reader that the author is either going to define the word or offer more information about the statement. In this example, the author defines responsibility as "what each of us should make sure we do" (line 2). The rest of the answer choices do not define responsibility, but rather offer examples of ways to show responsibility.
18. C. *Main Idea.* In lines 13-14, the author states: "I want to start with the responsibility you have to yourself," then follows up with "That's the opportunity an education can provide" (lines 16-

17). This is the author's way of showing that a student has to be responsible for their own education. According to line 7, it is the government that's responsible for turning around schools, not the students.

19. E. *Detail.* In lines 7-8, the author says that "the government needs to support teachers and principals." Teachers are responsible for inspiring students (lines 2-3). Parents are responsible for making sure students do not just play Xbox for hours (lines 4-5). The community is responsible for making sure students do their homework (lines 3-4).
20. B. *Detail.* In lines 15-16, the author claims that "Every single one of you has something you're good at…And it is your job to discover what that is." In lines 19-21, the author is not saying that the students have to simply discover what it takes "to be a doctor" – that is only one example of the many possible professions that the author lists, to support the argument that students need to find out what they want to be, and then get an education relevant to their dream field.
21. A. *Main Idea.* The passage is mainly about how the naming of hurricanes began (lines 6-10) and how names are chosen today (lines 11-14), so the overall main idea is best described as "how hurricanes get their names." Though the passage tells how Hurricane Chris got its name (line 14) and mentions that Katrina was the worst hurricane ever to hit the United States (lines 15-16), those are details rather than the main topic of the passage. There are no jokes in the passage about hurricane names.
22. E. *Detail.* All of these hurricane names appear in the passage, but the passage directly states that "Hurricane Katrina was the worst one ever to strike the United States" (lines 15-16).
23. D. *Detail*. The author wrote "Today… A world weather group picks the names" (lines 11-12). The government named hurricanes beginning in 1950 (lines 5-6), but it no longer names them today. Though the passage talks about finding lists of hurricane names on the Internet (line 19), it doesn't say names are chosen by people on the Internet. There is no mention in the passage of weather scientists or the Navy.
24. C. *Inference.* The passage says that hurricane names are reused every six years, and that Chris will have its turn again in 2024 (lines 13-14). In line 15, the passage says that if a hurricane is very bad, its name can be retired. We can infer that if Chris is not used in 2024, it is because Chris was a very bad storm in 2018. No other reasons are given in the passage for why a name might be retired.
25. B. *Detail.* In lines 6-9, the narrator mentions baking cookies with her grandmother and making a mixing bowl, a paperweight and a mug out of clay that she got from her grandfather. She does not make any clay animals.
26. E. *Inference.* We do not see any instance when the narrator's grandparents express impatience with her or anyone else. The grandparents are creative, since they come up with interesting and fun tasks for their granddaughter (lines 6-9). They also express love for her and animals, and her grandfather wisely shows her how to care for a helpless rabbit (lines 13-15).
27. D. *Vocabulary*. In line 7, the narrator tells us that her grandfather showed her "how to work clay," then details the many things she made out of clay. She is using the malleable material to shape it into other objects. Though she seems to have enjoyed the activity, she does not necessarily see it as playing. "Hard" is an adjective and "job" is a noun, while a verb is needed in this context.
28. E. *Main Idea.* In lines 11-14, the narrator helps the trapped rabbit, learning that all living creatures deserve our respect. The other answers – home being safe; the narrator baking and sewing; the vegetable garden having a fence; and having fun bird-watching – are story details and are not lessons learned.

# Section 4 – Writing Sample

Responses may vary. Have an experienced tutor or educator review the writing sample.

# Section 5 – "Experimental"

1. A. *Main Idea.* The author states that the Renaissance was a time when Italian artists "studied the art of Ancient Greece and Rome" (line 3), hence it is inspired by old ideas. The passage also states that the Renaissance resulted in "new scientific discoveries" (line 9), "new inventions" (line 11), and a "new era in history" (line 14). While the Renaissance inspired artists to create painting and sculptures, and scientists to develop new ideas, those are details rather than the main idea of the entire passage.
2. B. *Detail.* Martin Luther is not mentioned in the excerpt. "Michelangelo" (line 5), "da Vinci" (line 5), "Galileo" (line 10), and "Johannes Gutenberg" (line 12) are all referenced in the passage.
3. A. *Inference.* According to the passage, "The Renaissance began in Italy, more than 600 years ago" (line 1). As it is currently in the 2000s, six hundred years ago would be the 1400s. No other dates are referenced.
4. C. *Inference*. The passage states that the Renaissance "was a time of rebirth. Italian artists…studied the art of Ancient Greece and Rome" (lines 2-3). While it produced great artists and scientists, it was not a rebirth of specifically either field of study.
5. B. *Inference.* Renaissance artists "made many paintings and sculptures…[that] tried to honor the human body in a realistic way" (lines 5-6), which created a "new way of thinking…called humanism" (lines 6-7). Hence, one may infer that a sculpture must be representative of the human body to be a humanist work. While many humanistic paintings and sculptures drew inspiration from the Greeks and Romans, not all humanistic paintings were Greek or Roman.
6. E. *Vocabulary.* Since the article is about history, and the Renaissance was a "*time* of rebirth" (line 2), the answer is most likely time. While new ideas were created during this era, an era references the period of time that ideas are from, rather than the ideas themselves.
7. D. To "subtract" means to take away, or to "minus." Although "add," "amounts," "equal," and "math" are all commonly associated with "subtract," none of them are synonyms.
8. E. A "glimpse" is to see, or "spy." Someone may glare, or stare, at someone, but "glare" implies that a feeling of anger involved, while "glimpse" does not specify any particular emotion.
9. D. "Pitiful" means evoking pity, or "pathetic." Although "apologetic," or remorse, and "pitiful" may seem similar, "pitiful" has a strong negative connotation and "apologetic" has a positive connotation. "Selfish" means self-centered, and is not a synonym of "pitiful."
10. A. "Seldom" means "rarely," which is the opposite of "often," making this an antonym analogy. "Carefree," or untroubled, and "worried" are also opposites. Though the words "entertained" (amused) and "carefree" both have positive connotations, they are not synonyms. Drained, or tired, is not an antonym of "carefree."
11. A. *Measurement – Time and Money.* If Khadi has $5.00 and Allie has three times as much, Allie has 3 × 5 = $15.00, and together they have 5 + 15 = $20.00. Subtract the cost of the present to find what is left. When subtracting money, remember to line up the decimal points. $20.00 – $19.52 = $0.48.
12. B. *Geometry – Area and Perimeter. When* you add the length and width of a rectangle, you get half of the perimeter. Half of the given perimeter is 10 units, so length + width = 10. Replacing the length with 8 gives us: 8 + width = 10, or width = 10 – 8 = 2. Area is calculated by multiplying length by width: Area= 8 units × 2 units = 16 square units.
13. E. *Numbers – Arithmetic Word Problems.* To find the number of packs Veronica originally had, add what she has left (3) to what she gave away (2): 3 + 2 = 5. Then multiply the number of packs by the number of cards in each pack to get the total: 5 × 12 = 12 + 12 + 12 + 12 + 12 = 60.
14. C. *Statistics – Mean.* Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. First, calculate David's page counts for each day by adding 8 to the prior number: Day 1 = 36 pages, Day 2 = 36 + 8 = 44 pages, Day 3 = 44 + 8 = 52 pages. Then, add up the values and divide by the number of days: (36 + 44 + 52) ÷ 3 = 132 ÷ 3 = 44.

15. C. *Algebra – Equations and Inequalities.* 9 is a one-digit number, and it is NOT greater than 11, which is a two-digit number. Note that since 5 = 5, it is true that 5 ≤ 5.

# Quantitative Reasoning & Mathematics Achievement

## Number Concepts & Operations

### Place Value

**3rd Grade**

1. B. Subtract to find the distance between 2,5 and each answer choice: 2.50 – 2.49 = 0.01; 2.50 – 2.45 = 0.05; 2.50 – 2.48 = 0.02; 2.54 – 2.50 = 0.04; and 2.53 – 2.50 = 0.03. Since 2.45 is 5 hundredths away from 2.5, it is the farthest.
2. D. The digit 9 is one place to the right of the decimal so 9 is in the tenths place and is equivalent to $\frac{9}{10}$.
3. B. The digit 8 is two places to the right of the decimal so 8 is in the hundredths place and it is equivalent to $\frac{8}{100}$.
4. E. The digit 3 is two places to the right of the decimal point, so it is in the hundredths place.
5. E. The digit 4 is three places to the right of the decimal so it is in the thousandths place and is equivalent to $\frac{4}{1{,}000}$.
6. B. The digit 9 is two places to the left of the decimal point, so it is in the tens place.
7. D. With a 5 in the ones place, round up to the nearest ten to get to 1,390.
8. E. With a 6 in the tens place, round up to the nearest hundred. This causes 900 to turn into 1,000.

**4th Grade**

1. D. Subtract to find the distance between 26 and each answer choice: 26.000 – 25.498 = 0.502; 26.000 – 25.899 = 0.101; 26.000 – 25.909 = 0.091; 26.057 – 26.000 = 0.057; 26 – 26.1 = 0.1 = 0.100. Since 26.057 is only 57 thousandths away from 26, it is the closest.
2. B. Subtract to find the distance between 89 and each answer choice: 89.099 – 89.000 = 0.099; 89.000 – 88.898 = 0.102; 89.000 – 88.919 = 0.081; 89.09 – 89.00 = 0.09 = 0.090. Since 88.898 is 102 thousandths away from 89, it is the farthest.
3. A. Subtract to find the distance between 102 and each answer choice: 102.00 – 101.09 = 0.91; 102.0 – 101.9 = 0.1 = 0.10; 102.00 – 101.97 = 0.03; 102.02 – 102.00 = 0.02; and 102.11 – 102.00 = 0.11. Since 101.09 is 91 hundredths away from 102, it is the farthest.
4. D. The digit 8 is four places to the right of the decimal so it is in the ten-thousandths place and is equivalent to $\frac{8}{10{,}000}$.
5. C. The digit 1 is three places to the right of the decimal point, so it is in the thousandths place.
6. E. The digit 3 is five places to the right of the decimal point, so it is in the hundred-thousandths place.
7. E. With an 8 in the hundreds place, round up to the nearest thousand to get to 28,000.
8. E. With a 6 in the tens place, round up to the nearest hundred. This causes the 900 to become 1,000 which causes the 19,000 to become 20,000.

### Basic Concepts

**3rd Grade**

1. B. Nine thousand is 9,000. Three hundred is 300. Two is 2. Add the values: 9,000 + 300 + 2 = 9,302.
2. C. Six thousand is 6,000. Seventy-four is 74. Add the values: 6,000 + 74 = 6,074.

3. E. In expanded form, 545 = 500 + 40 + 5 and 317 = 300 + 10 + 7. First, add the ones: 5 + 7 = 12. Next, add the tens: 40 + 10 = 50. Last, add the hundreds: 500 + 300 = 800. Find the sum of the place values: 800 + 50 + 12 = 862.
4. C. In expanded form, 761 = 700 + 60 + 1 and 322 = 300 + 20 + 2. First, subtract the ones. However, when we try to subtract the ones we get 1 – 2 which is not possible since 1 is smaller than 2. We must regroup 761 as 700 + 50 + 11. Now we have 11 – 2 = 9. Next, subtract the tens and we get 50 – 20 = 30. Last, subtract the hundred to get 700 – 300 = 400. Find the sum of the place values: 400 + 30 + 9 = 439.
5. B. In expanded form, 308 = 300 + 00 + 8 and 199 = 100 + 90 + 9. First, subtract the ones. However, when we try to subtract the ones we get 8 – 9 which is not possible since 9 is smaller than 8. If we look ahead, we see subtraction is also not possible in the tens place. We must regroup 308 as 200 + 90 + 18. Now we have 18 – 9 = 9. Next, subtract the tens and we get 90 – 90 = 0. Last, subtract the hundreds to get 200 – 100 = 100. Find the sum of the place values: 100 + 0 + 9 = 109.
6. C. On the left side of the equation, 104 + 342 = 446. In order for the equation to be balanced, we need the right side to also be equal to 446. We must therefore add 346 to 100.
7. D. One method is to use the expanded form of each number. In expanded form, 37 × 26 = (30 + 7) × (20 + 6). We need to find four products and add them: (30 × 20) + (30 × 6) + (7 × 20) + (7 × 6) = 600 + 180 + 140 + 42 = 962.
8. E. A prime number has exactly two distinct factors, 1 and itself. Of the answer choices, 2, 7, 11, and 23 are prime numbers and 27 is not (because 3 and 9 are also factors of 27).
9. D. The 0 in the ones place indicates that 70 is a multiple of 10. Since 7 × 10 = 70, then 70 ÷ 7 = 10.
10. B. A prime number has exactly two distinct factors, 1 and itself. This is only true of 13. The other answer choices have additional factors.

**4th Grade**

1. E. A prime number has exactly two distinct factors, 1 and itself. This is only true of 2. The other answer choices have additional factors.
2. D. In expanded form, 1,089 = 1,000 + 80 + 9 and 2,352 = 2,000 + 300 + 50 + 2. First, add the ones: 9 + 2 = 11. Next, add the tens: 80 + 50 = 130. Last, add the thousands: 1,000 + 2,000 = 3,000. Find the sum of the place values: 3,000 + 300 + 130 + 11 = 3,441.
3. C. In expanded form, 1,842 = 1,000 + 800 + 40 + 2 and 752 = 700 + 50 + 2. First, subtract the ones. However, when we try to subtract the tens we get 4 – 5 which is not possible since 4 is smaller than 5. We must regroup 1,842 as 1,000 + 700 + 140 + 2. Now we have 2 – 2 = 0. Next, subtract the tens and we get 140 – 50 = 90. Last, subtract the hundreds to get 700 – 700 = 0. Find the sum of the place values: 1,000 + 0 + 90 = 1,090.
4. A. In expanded form, 2,765 = 2,000 + 700 + 60 + 5 and 389 = 300 + 80 + 9. First, subtract the ones. However, when we try to subtract the ones we get 5 – 9 which is not possible since 5 is smaller than 9. We must regroup 2,765 as 2,000 + 600 + 150 + 15. Now we have 15 – 9 = 6. Next, subtract the tens and we get 150 – 80 = 70. Last, subtract the hundreds to get 600 – 300 = 300. Find the sum of the place values: 2,000 + 300 + 70 + 6 = 2,376.
5. E. On the left side of the equation, 71 + 94 = 165. In order for the equation to be balanced, we need the right side to also be equal to 165. We must therefore add 65 to 100.
6. C. On the left side of the equation, 388 + 505 = 893. In order for the equation to be balanced, we need the right side to also be equal to 893. We must therefore add 393 to 500.
7. D. One method is to use the expanded form of each number. In expanded form, 92 × 18 = (90 + 2) × (10 + 8). We need to find four products and add them: (90 × 10) + (90 × 8) + (2 × 10) + (2 × 8) = 900 + 720 + 20 + 16 = 1,656.

8. E. One method is to use the expanded form of each number. In expanded form, 168 × 27 = (100 + 60 + 8) × (20 + 7). We need to find six products and add them: (100 × 20) + (100 × 7) + (60 × 20) + (60 × 7) + (8 × 20) + (8 × 7). After multiplying, this becomes 2,000 + 700 + 1,200 + 420 + 160 + 56 = 4,536.
9. D. 800 ÷ 10 = 80. Since 804 – 800 = 4, the remainder is 4. So, 804 ÷ 10 = 80 R 4.
10. C. 320 ÷ 8 = 40. Since 324 – 320 = 4, the reminder is 4. So, 325 ÷ 8 = 40 R 4.
11. A. First, find the value of the expression in parentheses: 2 × 5 = 10 so 10 – ___ = 7. The only value that makes the equation true is 3 since 10 – 3 = 7.
12. B. First, find the value of the expression in parentheses. 10 – 4 = 6 so 6 × ___ = 18. The only value that makes this equation true is 3 since 6 × 3 = 18.
13. C. First, find the value of the expression in parentheses: 12 + 6 = 18 so 18 ÷ ___ = 2. The only value that makes this equation true is 9 since18 ÷ 9 = 2.
14. C. First, find the value of the expression in parentheses: 7 + 5 = 12 so 12 ÷ ___ = 3. The only value that makes the equation true is 4 since 12 ÷ 3 = 4.

## Ordering Numbers and Fractions

**3rd Grade**

1. C. Of the given answer choices: $2.00 is less than $2.25 and $3.00 is more than $2.75 so they are incorrect; $2.25 is incorrect because Benito spends MORE than $2.25, so he cannot spend that exact amount; and $2.75 is incorrect because Benito spends LESS than $2.75, so he cannot spend that exact amount. $2.50 is the only answer choice between $2.25 and $3.00.
2. B. The is only one job that pays more than $7.25 an hour: babysitting, which earns Jake $8.75 an hour.
3. A. When DENOMINATORS are EQUAL, the fraction with the SMALLEST NUMERATOR has the SMALLEST VALUE. Since 1 is the smallest numerator, $\frac{1}{4}$ is the smallest fraction.
4. C. When the NUMERATORS are EQUAL, the fraction with the GREATEST DENOMINATOR has the LEAST VALUE. Since 20 is the greatest denominator, $\frac{1}{20}$ is the fraction with the least value.
5. C. Since the numerators are equal, choose the denominator between, but not including, 3 and 5. Since 4 is between 3 and 5, $\frac{1}{4}$ is between $\frac{1}{5}$ and $\frac{1}{3}$. Jasper could have read $\frac{1}{4}$ of the book.
6. B. When the NUMERATORS are EQUAL, the fraction with the SMALLEST DENOMINATOR has the LARGEST VALUE. Since 3 is the smallest denominator, $\frac{1}{3}$ is the largest fraction. The cart contains the largest amount of oranges.
7. C. When NUMERATORS are EQUAL, the fraction with the SMALLEST DENOMINATOR has the LARGEST VALUE. Since 2 is the smallest denominator, $\frac{1}{2}$ is the largest fraction. Frances spent the longest time, $\frac{1}{2}$ of an hour, studying math.

**4th Grade**

1. D. The price of sunscreen must be greater than $8.00 and less than $10.25 so it cannot be exactly $8.00 or $10.25. $10.00 is the only answer choice greater than $8.00 and less than $10.25.
2. B. When NUMERATORS are EQUAL, the fraction with the GREATEST DENOMINATOR has the SMALLEST VALUE. Since 9 is the largest denominator, $\frac{1}{9}$ is the smallest fraction.
3. E. First, reduce $\frac{3}{300}$ to $\frac{1}{100}$ and $\frac{2}{500}$ to $\frac{1}{250}$. Now that all NUMERATORS are EQUAL, compare denominators. The fraction with the GREATEST DENOMINATOR has the LEAST VALUE. The largest denominator is 1,000 so $\frac{1}{1,000}$ has the least value.

4. E. Since the numerators are equal, focus on the denominators. The fraction with the largest denominator has the least value, while the fraction with the largest denominator has the greatest value. Since 1,000 > 100 > 50 > 20 > 10, then $\frac{1}{1{,}000} < \frac{1}{100} < \frac{1}{50} < \frac{1}{20} < \frac{1}{10}$.
5. A. Start with numbers greater than 1: since 8 > 7, $\frac{8}{7} > 1$. This is the largest number. All other answer choices are less than 1, so 1 is the next largest. Of the three remaining choices ($\frac{1}{3}$, $\frac{2}{3}$, and $\frac{1}{7}$), compare fractions with same numerators first ( $\frac{1}{3}$ and $\frac{1}{7}$ ). Since 3 < 7, $\frac{1}{3} > \frac{1}{7}$. Now compare fractions with like denominators ( $\frac{1}{3}$ and $\frac{2}{3}$ ). Since 2 > 3, $\frac{2}{3} > \frac{1}{3}$. Therefore, $\frac{2}{3} > \frac{1}{3} > \frac{1}{7}$, and the order of all five numbers is: $\frac{8}{7} > 1 > \frac{2}{3} > \frac{1}{3} > \frac{1}{7}$.
6. C. When the NUMERATORS are EQUAL, the fraction with the GREATEST DENOMINATOR has the LEAST VALUE. Since 10 is the largest denominator, $\frac{1}{10}$ is the smallest fraction so Kyra ate the smallest amount.
7. D. Reduce $\frac{5}{50}$ to $\frac{1}{10}$, $\frac{2}{20}$ to $\frac{1}{10}$ and $\frac{4}{20}$ to $\frac{2}{10}$, and convert $\frac{1}{5}$ to $\frac{2}{10}$. Now that all DENOMINATORS are EQUAL, compare the numerators. The fraction with the LARGEST NUMERATOR has the LAREGST VALUE. The largest numerator is 3 so $\frac{3}{10}$ is the largest fraction. Roxanne has the largest amount of poetry books.

## Fractions

**3rd Grade**

1. E. First, divide the numerator by the denominator: 8 ÷ 5 = 1 R 3. Then place the remainder above the denominator and add to the whole number: $1 + \frac{3}{5} = 1\frac{3}{5}$.
2. C. Both the numerator and denominator are divisible by 12: $\frac{24}{36} = \frac{24 \div 12}{36 \div 12} = \frac{2}{3}$. Of the given answer choices, $\frac{4}{6}$ and $\frac{12}{18}$ are also equivalent fractions but are not in simplest form.
3. D. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 15: $\frac{1}{3} + \frac{3}{5} = \frac{1 \times 5}{3 \times 5} + \frac{3 \times 3}{5 \times 3}$. This simplifies to $\frac{5}{15} + \frac{9}{15} = \frac{14}{15}$.
4. B. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 8: $\frac{1 \times 4}{2 \times 4} + \frac{3}{8}$. This simplifies to $\frac{4}{8} + \frac{3}{8} = \frac{7}{8}$.
5. E. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 40: $\frac{1}{5} + \frac{3}{8} = \frac{1 \times 8}{5 \times 8} + \frac{3 \times 5}{8 \times 5}$. This simplifies to $\frac{8}{40} + \frac{15}{40} = \frac{23}{40}$.
6. A. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 20: $\frac{3}{5} - \frac{1}{4} = \frac{3 \times 4}{5 \times 4} - \frac{1 \times 5}{4 \times 5}$. This simplifies to $\frac{12}{20} - \frac{5}{20} = \frac{7}{20}$.
7. C. To add mixed numbers, it may help to convert them to improper fractions: $7\frac{1}{6} = \frac{6 \times 7 + 1}{6} = \frac{43}{6}$ and $3\frac{5}{6} = \frac{6 \times 3 + 5}{6} = \frac{23}{6}$. Now add: $\frac{43}{6} + \frac{23}{6} = \frac{66}{6} = 11$.
8. A. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 40: $\frac{7}{10} - \frac{3}{8} = \frac{7 \times 4}{10 \times 4} - \frac{3 \times 5}{8 \times 5} = \frac{28}{40} - \frac{15}{40} = \frac{13}{40}$.
9. C. This word problem can be set up using fractions: 5 slices out of 8 total is $\frac{5}{8}$ and 2 slices out of 8 total is $\frac{2}{8}$. Subtract the amounts to find the fraction of pizza left: $\frac{5}{8} - \frac{2}{8} = \frac{3}{8}$.
10. C. The pizza on the left has 6 out of 8 slices left or $\frac{6}{8}$ of a pizza. The pizza on the right has 4 out of 8 slices left or $\frac{4}{8}$ of a pizza. Add the amounts to find total pizza: $\frac{6}{8} + \frac{4}{8} = \frac{10}{8}$ which can be written as $1\frac{2}{8}$.

11. E. Add the amounts to find the total. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 12: $\frac{3}{4} + \frac{2}{3} = \frac{3 \times 3}{4 \times 3} + \frac{2 \times 4}{3 \times 4}$. This simplifies to $\frac{9}{12} + \frac{8}{12} = \frac{17}{12}$, or $1\ \frac{5}{12}$.
12. E. Subtract the amounts to find how many pounds are left. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 12: $\frac{3}{4} - \frac{1}{6} = \frac{3 \times 3}{4 \times 3} - \frac{1 \times 2}{6 \times 2}$. This simplifies to $\frac{9}{12} - \frac{2}{12}$, or $\frac{7}{12}$.
13. D. Subtract the amounts to find the fraction of the pie that will be remaining. When the denominators are not equal, use the least common denominator to find equivalent fractions. Here, the least common denominator is 8: $\frac{3 \times 2}{4 \times 2} - \frac{1}{8}$. This simplifies to $\frac{6}{8} - \frac{1}{8} = \frac{5}{8}$.

**4th Grade**

1. C. First, divide the numerator by the denominator: $45 \div 8 = 5$ R 5. Then place the remainder above the denominator and add to the whole number: $5 + \frac{5}{8} = 5\ \frac{5}{8}$.
2. A. First, divide the numerator by the denominator: $35 \div 9 = 3$ R 8. Then, place the remainder above the denominator and add to the whole number: $3 + \frac{8}{9} = 3\ \frac{8}{9}$.
3. E. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 40: $\frac{2}{5} + \frac{3}{8} = \frac{2 \times 8}{5 \times 8} + \frac{3 \times 5}{8 \times 5}$. This simplifies to $\frac{16}{40} + \frac{15}{40} = \frac{31}{40}$.
4. E. It may help to convert the mixed numbers to improper fractions: $5\ \frac{3}{8} = \frac{8 \times 5 + 3}{8} = \frac{43}{8}$ and $7\ \frac{1}{4} = \frac{4 \times 7 + 1}{4} = \frac{29}{4}$. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 8: $\frac{43}{8} + \frac{29 \times 2}{4 \times 2} = \frac{43}{8} + \frac{58}{8}$. This simplifies to $\frac{101}{8}$, or $12\ \frac{5}{8}$.
5. C. It may help to convert the mixed numbers to improper fractions: $4\ \frac{3}{4} = \frac{4 \times 4 + 3}{4} = \frac{19}{4}$ and $6\ \frac{1}{8} = \frac{6 \times 8 + 1}{6} = \frac{49}{8}$. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 8: $\frac{19 \times 2}{4 \times 2} + \frac{49}{8} = \frac{38}{8} + \frac{49}{8}$. This simplifies to $\frac{87}{8}$, or $10\ \frac{7}{8}$.
6. C. When multiplying fractions, multiply the numerators and denominators: $\frac{1}{8} \times \frac{1}{3} = \frac{1 \times 1}{8 \times 3}$. This simplifies to $\frac{1}{24}$.
7. B. When multiplying fractions, multiply the numerators and denominators: $\frac{2}{3} \times \frac{3}{5} = \frac{2 \times 3}{3 \times 5}$. This simplifies to $\frac{6}{15}$, or $\frac{2}{5}$.
8. A. When multiplying fractions, multiply the numerators and denominators: $\frac{3}{7} \times \frac{1}{2} = \frac{3 \times 1}{7 \times 2}$. This simplifies to $\frac{3}{14}$.
9. E. When multiplying fractions, multiply the numerators and denominators. $\frac{3}{7} \times \frac{3}{8} = \frac{8 \times 8}{7 \times 8}$. This simplifies to $\frac{9}{56}$.
10. C. Add the amounts to find total cups of green paint. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 24: $\frac{3}{8} + \frac{2}{3} = \frac{3 \times 3}{8 \times 3} + \frac{2 \times 8}{3 \times 8}$. This simplifies to $\frac{9}{24} + \frac{16}{24} = \frac{25}{24}$, or $1\ \frac{1}{24}$.

11. D. Subtract the amounts to find time left. It may help to convert the mixed number to an improper fraction: $2\frac{1}{4} = \frac{4 \times 2 + 1}{4} = \frac{9}{4}$. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 12: $\frac{9}{4} - \frac{1}{3} = \frac{9 \times 3}{4 \times 3} - \frac{1 \times 4}{3 \times 4} = \frac{27}{12} - \frac{4}{12} = \frac{23}{12} = 1\frac{11}{12}$.
12. D. Subtract the amounts to find cups of sugar left. Rewrite the whole number 2 as $\frac{2}{1}$. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 4: $\frac{2}{1} - \frac{1}{2} - \frac{3}{4} = \frac{2 \times 4}{1 \times 4} - \frac{1 \times 2}{2 \times 2} - \frac{3}{4} = \frac{8}{4} - \frac{2}{4} - \frac{3}{4} = \frac{8 - 2 - 3}{4} = \frac{3}{4}$.
13. D. Rewrite the whole number 8 as $\frac{8}{1}$ and multiply to solve: $\frac{3}{5} \times \frac{8}{1} = \frac{3 \times 8}{5 \times 1} = \frac{24}{5} = 4\frac{4}{5}$. Mimi must round up to the next whole liter. Therefore, she needs 5 liters of juice.
14. C. Since the pizza is broken into 8 equal slices, the whole pizza is 1, or $\frac{8}{8}$. To find the remaining slices, subtract the amounts that Jamila and Lulu ate. Since the denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 8: $\frac{8}{8} - \frac{1}{4} - \frac{3}{8} = \frac{8}{8} - \frac{1 \times 2}{4 \times 2} - \frac{3}{8}$. This simplifies to $\frac{8}{8} - \frac{2}{8} - \frac{3}{8} = \frac{3}{8}$. Since each slice is $\frac{1}{8}$, $\frac{3}{8}$ is equivalent to 3 slices.

## Arithmetic Word Problems

**3rd Grade**

1. C. 8 grams per kiwi times 5 kiwis equals 40 total grams: 8 × 5 = 40.
2. C. 13 students times $3 per pair of ice skates equals $39 total: 13 × 3 = 39.
3. B. There are 7 days in a week. 4 melons per day times 7 days equals 28 total melons: 4 × 7 = 28.
4. D. 72 total teaspoons divided by 6 teaspoons per piece of toast equals 12 pieces of toast: 72 ÷ 6 = 12
5. E. 76 basketballs divided by 6 basketballs per bucket equals 12 buckets with 4 left over. Therefore, 13 buckets are needed: 76 ÷ 6 = 12 R 4.
6. D. 98 total horses divided by 4 horses per carriage equals 24 carriages with 2 horses leftover. Therefore, 24 carriages can be pulled: 98 ÷ 4 = 24 R 2.
7. E. 2.5 teaspoons per batch times 7 batches equals 17.5 total teaspoons: 2.5 × 7 = 17.5.
8. C. "On average, each student has 9 pencils" means if they split up their total pencils evenly, they would each have 9 pencils. Therefore, 9 pencils per student times 6 students equals 54 total pencils: 9 × 6 = 54.
9. B. There are 12 eggs in a dozen. 36 total eggs divided by 12 eggs per carton equals 3 cartons: 36 ÷ 12 = 3.
10. A. There are 12 gemstones in a dozen. 240 total gemstones divided by 12 gemstones per box equals 20 boxes: 240 ÷ 12 = 20.
11. E. 262 boxes of whole grain crackers plus 89 boxes of gluten-free crackers plus 127 boxes of cheesy crackers equals 478 total boxes of crackers: 262 + 89 +127 = 478.
12. D. Speedy AB's 54 taxis plus Red Cab's 162 taxis plus Wheels for Hire's 143 taxis equals 359 total taxis: 54 + 162 + 143 = 359.
13. E. If 79 is half of her original amount, then her original amount is double 79: 2 times 79 cards equals 158 cards: 2 × 79 = 158.
14. C. If 62 is half of her original amount, then her original amount is double 62: 2 times 62 cards equals 124 cards: 2 × 62 = 124.

15. A. First, divide 84 by 2 to find half of the 84 pieces of candy: 84 ÷ 2 = 42 pieces. Since he ate 2 pieces, subtract to find how many pieces are left: 42 – 2 = 40.
16. E. If 16 shells is half of his remaining shells, then then the amount he had before he gave shells to his sister is double 16: 2 × 16 = 32. Now we know amount he originally he had 32 shells after he gave shells to his mother. If 32 shells is half of his original amounts, then his original amount is double 32: 2 × 32 = 64.
17. D. First, subtract to find the number of marbles Adam has: 120 – 30 = 90. Then add to find how many marbles Glen has: 90 + 50 = 140.

**4th Grade**

1. A. 346 pennies in Abdul's piggy minus the 159 pennies he removes equals 187 pennies left. 346 – 159 = 187.
2. B. 408 bracelets Maria made minus the 362 she sold equals 46 bracelets left. 408 – 362 = 46.
3. A. 617 total pages minus the 248 Tanya read equals 369 pages left. 617 – 248 = 369.
4. E. Zach's 213 stamps plus Tina's 68 stamps plus Elan's 182 stamps equals 463 total stamps: 213 + 68 + 182 = 463.
5. E. Dale's 88 pieces plus Alicia's 114 pieces plus Carmen's 97 pieces equals 299 total pieces: 88 + 114 + 97 = 299.
6. C. 28 oranges per crate times 3 crates equals 84 total oranges: 28 × 3 = 84.
7. D. 45 photographs per album times 4 albums equals 180 total photographs: 45 × 4 = 180.
8. D. 38 packages per day times 3 days equals 114 total packages: 38 × 3 = 114.
9. E. 140 total people divided by 7 people per row equals 20 rows: 140 ÷ 7 = 20.
10. B. 156 total chocolates divided by 6 chocolates per box equals 26 boxes: 156 ÷ 6 = 26.
11. A. 127 packages in the truck minus the 39 packages delivered equals 88 packages left: 127 – 39 = 88.
12. A. After giving half of his cards to his sister, Samson has 73 cards (146 divided by 2). Those 73 cards minus the 22 cards Samson gives to his brother equals 51 cards left: 146 ÷ 2 = 73 and 73 – 22 = 51.
13. A. $144 divided by 2 equals $72 spent on the bike and $72 left. $72 minus the $17 spent on the helmet equals $55 left: 144 ÷ 2 = 72 and 72 – 17 = 55.
14. C. Vikrant's 272 stamps times 2 equals 544 stamps. 544 stamps minus the 98 stamps sold equals 446 stamps left: 272 × 2 = 544 and 544 – 98 = 446.
15. C. Trisha's 33 quarters times 3 equals 99 quarters. 99 quarters minus 20 quarters equals 79 quarters: 33 × 3 = 99 and 99 – 20 = 79.
16. B. 203 cards minus the 78 cards Ajax sold equals 125 cards left: 203 – 78 = 125.

# Algebraic Principles

## Solving Equations and Inequalities

**3rd Grade**

1. D. Multiplication is simply repeated addition, so we can rewrite 2 + 2 + 2 + 2 + 2 = $m$ as 2 × 5 = $m$.
2. B. Since 7 × 8 = 56, $a$ = 8. Substitute 8 in for $a$ in the second equation: 8 ÷ 2 = 4.
3. D. Solve for $y$ by subtracting 15 from 33 in the first equation: 33 – 15 = 18 = $y$. Substitute 18 for $y$ into the second equation: 18 + 33 = 51.
4. C. First, add the numbers on the left: 7 + 7 = 14. The new equation is 14 = 3 + $m$. Since 3 + 11 = 14, $m$ = 11.

5. D. First, find the product on the left side of the equation: 4 × 10 = 40. The new equation is: 40 = 2 × *k*. Since 2 × 20 = 40, *k* = 20.

**4th Grade**

1. B. A quotient results from division. Perform the indicated operation as follows: 12 ÷ 12 = 1.
2. C. 0 is NOT greater than 4. It is less than 4 so the inequality should state 0 < 4. Note that since 7 = 7, it is true that 7 ≤ 7.
3. B. $\frac{1}{2}$ feet = 6 inches. Therefore, Jane's frog and David's frog jumped the same distance.
4. A. If a number is less than 7, then 7 must be greater than that number.
5. B. Since Sue is splitting 15 crayons among 3 boxes, we can use division to find the number of crayons in each box: 15 ÷ 3 = *c*. But this is not an answer choice, so we must change our equation. If 15 ÷ 3 = *c*, it must be true that 3 × *c* = 15 since multiplication and division are opposite, or inverse, operations.

## Ratios and Proportions

**3rd Grade**

1. E. Each spoon represents 15 grams. This means we can multiply the number of spoons by 15 to find the number of grams. Since there are 6 spoons, there are 6 × 15 = 90 grams.
2. D. Each inch represents 12 kilometers. This means we can multiply the number of inches on the map by 12 to find the actual length of the island. Since it is 3 inches long on the map, it should be 3 × 12 = 36 kilometers.
3. D. For every 1 circle, there are 4 squares. This means we can multiply the number of circles by 4 to get the number of squares. Since there are 60 circles, there are 60 × 4 = 240 squares.
4. B. For every slice of pizza, there are 8 pieces of pepperoni. We can divide the total number of pepperoni pieces used by 8 to get the number of slices. Since there are 96 pieces of pepperoni, there are 96 ÷ 8 = 12 slices.

**4th Grade**

1. B. To go from 12 to 24, we multiply by 2. Using this pattern, multiply 8 by 2 to get 16.
2. D. To go from 56 to 8, we divide by 7. Since the missing number is the first term, reverse the operation to multiplication. Multiply by 7 by 7 to get 49.
3. C. Each handful is 12 grams. This means we can multiply the number of handfuls by 12 to find the number of grams. Since there are 8 handfuls, there are 12 × 8 = 96 grams.
4. B. For every 1 red fruit, there are 5 green fruits. We are told the number of green fruits, so we want to divide by 5 to find the number of red fruits. Since there are 30 red fruits, there are 30 × 5 = 6 green fruits.
5. C. For every 1 clear marble, there are 8 colorful marbles. Together, that makes 9 marbles for a basic set. We are told the total number of marbles, so we want to divide that by 9 to find the number of sets: 72 ÷ 9 = 8. Since there are 8 sets, there are 8 clear marbles in the jar: 1 × 8 = 8.

# Geometry

## Shapes and Attributes

**3rd Grade**

1. C. This triangle has three equal sides, which makes it an equilateral triangle.
2. C. A quadrilateral is a shape with four sides. Types of quadrilaterals include parallelograms, rhombuses, rectangles, squares, trapezoids, and kites.
3. A. Since the four sides are not equal, the window cannot be a square.
4. A. A parallelogram is a quadrilateral with two pairs of parallel sides. A trapezoid has only one pair of parallel sides.

5. B. A rectangle is a quadrilateral with two pairs of parallel sides and four right angles. A pentagon cannot be a rectangle.
6. D. A square has four equal sides AND four right angles. The shape in answer choice D is a rhombus but cannot be a square since the angles are not right angles.
7. B. A rhombus is a parallelogram with four equal sides. Choice B does not have four equal sides and is therefore not a rhombus.

**4th Grade**

1. C. Of the shapes listed, only a trapezoid does not have two pairs of parallel sides. A trapezoid only has one pair of sides that are parallel.
2. C. A ray, by definition, has one end point and then continues forever in one direction.
3. D. The measure of an angle is the length of the arc drawn between the two rays that form the angle. The angle with the longest arc has the greatest angle measure.
4. E. A right angle measure 90° and is made up of two perpendicular rays.
5. B. This angle is less than 90°, so it is acute.
6. A. The two lines intersect and form four right angles. They are perpendicular.
7. A. A shape is symmetrical if you can draw a line of symmetry where you could fold the shape and both sides would match.

## Area and Perimeter

**3rd Grade**

1. D. Since the shape is a rectangle, the two missing sides are also 8 ft. and 3 ft. Perimeter is calculated by adding all the side lengths of a closed shape: perimeter = 8 ft. + 3 ft. + 8 ft. + 3 ft. = 22 ft.
2. C. Perimeter is calculated by adding all the side lengths of a closed shape: Perimeter = 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 =32 or Perimeter = 4 × 8 = 32.
3. B. Perimeter is calculated by adding all the side lengths of a closed shape: Perimeter = 3 + 2 + 1 + 1 + 3 + 2 + 1 + 1 = 14.
4. B. Area is calculated by multiplying length by width: Area = length × width. Replacing the area with 30, the length with 5 and the width with $x$ gives us: $30 = 5x$. Therefore, $x$ must equal 6 units since $30 = 5 \times 6$.
5. B. Area is calculated by multiplying length by width: Area = length × width. Replacing the area with 12 and the length with 6 gives us: 12 = 6 × width. The width must equal 2 units since 12 = 6 × 2. Perimeter is calculated by adding all the side lengths of a closed shape: perimeter = 6 + 2 + 6 + 2 = 16.
6. C. Area is calculated by multiplying length by width: Area = length × width. The area of the first rectangle is: 3 × 8 = 24. The area of the second rectangle is also 24 so $24 = 2 \times W$. Therefore, $W$ must equal 12 since $24 = 2 \times 12$.
7. B. Area is calculated by multiplying length by width: Area = length × width. Replacing the area with 42, the length with 7 and the width with $x$ gives us $42 = 7x$. Therefore, $x$ must equal 6 units since $42 = 7 \times 6$.

**4th Grade**

1. C. The base of this parallelogram is 5 units and the vertical height is 4 units. Area = 5 units × 4 units = 20 square units. We do not need the diagonal length of 6 for this problem.
2. D. When you add the length and width of a rectangle, you get half of the perimeter. Half of the given perimeter is 12 units, so length + width = 12. Replacing the length with 4 gives us: 4 + width = 12. Therefore, width must equal 8 units since 4 + 8 = 12. Area is calculated by multiplying length by width: Area= 4 units × 8 units = 32 square units.

3. A. When you add the length and width of a rectangle, you get half of the perimeter. Half of the given perimeter is 9 in. so length + width = 9. Replacing the length with 4 and width with *x* gives us: 4 + *x* = 9. Therefore, *x* must equal 5 in. since 4 + 5 = 9.
4. A. When you add the length and width of a rectangle, you get half of the perimeter. Half of the given perimeter is 11 ft. so length + width = 11. Replacing the length with 8 and width with *x* gives us: 8 + *x* = 11. Therefore, *x* must equal 3 ft. since 8 + 3 = 11.
5. B. The perimeter of a square with side length *S* is: perimeter = *S* + *S* + *S* + *S* or Perimeter = 4 × *S*. Replacing the perimeter with 24 ft. gives us: 24 = 4 × *S*. Therefore, the side length must equal 6 ft. since 24 = 4 × 6. The width of each rectangle will be 6 ft. and the length will be 3 ft. (half of 6 ft.). Perimeter is calculated by adding all the side lengths of a closed shape: perimeter = 6 + 3 + 6 + 3 = 18.
6. B. The base of the triangle is 6 units and its vertical height is 5 units. Area = $\frac{1}{2}$ (6 units × 5 units) = $\frac{1}{2}$ (30 square units) = 15 square units.
7. C. Replacing the area with 24 and the height with 8 gives us: 24 = $\frac{1}{2}$ (base × 8). If 24 is half of (base × 8), then (base × 8) is double 24. So (base × 8) = 48. Therefore, the base must equal 6 units since 6 × 8 = 48. Perimeter is calculated by adding all the side lengths of a closed shape: perimeter = 8 + 6 + 10 = 24.
8. B. The perimeter of the shape is 84 meters and it has 8 equal sides so 84 = *S* + *S* + *S* + *S* + *S* + *S* + *S* + *S* or 84 = 8 × *S*. To find *S*, divide 84 meters by 8: 84 meters ÷ 8 = 10.5 meters.
9. D. Replacing the area with 48 and the base with 12 gives us: 48 = $\frac{1}{2}$ (12 × height). If 48 is half of (12 × height), then (12 × height) is double 48. So (12 × height) = 96. Therefore, the base must equal 8 units since 12 × 8 = 96. The base of a small triangle is 6 units (half of 12 units). Perimeter is calculated by adding all the side lengths of a closed shape. Perimeter = 6 + 8 + 10 = 24.
10. C. The height of either triangle is 6 units. Replacing the area with 21 and the height with 6 gives us: 21 = $\frac{1}{2}$ (base × 6). If 21 is half of (base × 6), then (base × 6) is double 21. So (base × 6) = 42. Therefore, the base must equal 7 units since 7 × 6 = 42. Perimeter is calculated by adding all the side lengths of a closed shape: perimeter = 6 + 7 + 6 + 7 = 26.

# Measurement

## Time and Money

**3rd Grade**

1. C. There are 7 days in 1 week so there are 2 × 7 = 14 days in 2 weeks. Therefore, "2 weeks and 3 days" is equal to 14 + 3 = 17 days. The first day of school is 17 days after August 10 which is August 27 since 10 + 17 = 27.
2. B. There are 7 days in 1 week so there are 2 × 7 = 14 days in 2 weeks. Therefore, "2 weeks and 5 days" equals 14 + 5 = 19 days. Their vacation started 19 days before July 21 which is July 2 since 21 – 19 = 2.
3. B. There are 7 days in 1 week so there are 3 × 7 = 21 days in 3 weeks. Therefore, "3 weeks and 2 days" equals 21 + 2 = 23 days. Adding 23 days to May 2 gives us 25, so her party is on May 25.
4. D. Add to find the amount of money they have together. When adding money, remember to line up the decimal points. $3.25 + $4.67 = $7.92.
5. C. $1.15 is equal to 115 cents. A quarter is worth 25 cents so 4 quarters are worth 4 × 25 = 100 cents. She still needs another 15 cents. A dime is equal to 10 cents and a nickel equals 5 cents. The correct combination of coins is 4 quarters, 1 dime, and 1 nickel since 100 cents + 10 cents + 5 cents = 115 cents and 115 cents = $1.15.

6. C. Adding the minutes gives us: 30 + 45 = 75 minutes. Since there are 60 minutes in an hour, we know the test will go past 11:00 a.m. Subtract to find the number of minutes past 11:00 a.m.: 75 – 60 = 15. Therefore, the test will end 15 minutes past 11:00 a.m. which is 11:15 a.m.
7. E. As a decimal, $1 = $1.00. Add to find the total amount of money needed. When adding money, remember to line up the decimal points. $4.50 + $1.00 = $5.50.
8. B. As a decimal, 26¢ = $0.26. Subtract to find the amount of money left. When subtracting money, remember to line up the decimal points. $4.50 – $0.26 = $4.24.
9. C. Subtract to find the amount of money left. When subtracting money, remember to line up the decimal points. $6.78 – $4.50 = $2.28.
10. B. As a decimal, ten dollars = $10.00. Subtract to find the amount of money left. When subtracting money, remember to line up the decimal points and borrow if necessary: $10.00 – $7.65 = $2.35.
11. E. Subtract to find the amount Hallie needs: $12.55 – $10.80 = $1.75 and $1.75 equals 175 cents. A quarter is worth 25 cents, so 7 quarters are worth 7 × 25 = 175 cents. The correct combination of coins is 7 quarters.
12. E. Subtract to find how money Jeff needs from his brother: $6.50 – $5.20 = $1.30, and $1.30 = 130 cents. A quarter is worth 25 cents so 5 quarters is worth 5 × 25 = 125 cents. He still needs another 5 cents which is the value of 1 nickel. The correct combination of coins is 5 quarters and 1 nickel since 125 cents + 5 cents = 130 cents, and 130 cents = $1.30.
13. D. Subtract to find the amount of change Maria receives: $5.00 – $3.55 = $1.45, and $1.45 = 145 cents. A quarter is worth 25 cents so 5 quarters are worth 5 × 25 = 125 cents. She still needs another 20 cents. A dime is worth 10 cents so 2 dimes are worth 2 × 10 = 20 cents. The correct combination of coins is 5 quarters and 2 dimes since 125 cents + 20 cents = 145 cents, and 145 cents = $1.45.
14. B. Subtract to find amount of change received: $2.00 – $1.45 = $0.55, and $0.55 = 55 cents. A quarter is worth 25 cents and 2 quarters is worth 2 × 25 = 50 cents. He would still need 5 cents which is the value of 1 nickel or 5 pennies. However, these combinations are not answer choices. If Ben received 1 quarter (25 cents), then he would still need 30 cents. A dime is worth 10 cents so 3 dimes are worth 10 × 3 = 30 cents. The correct answer is 1 quarter and 3 dimes since 25 cents + 30 cents = 55 cents, and 55 cents = $0.55.

**4th Grade**

1. C. 5 days before April 5th is March 31st. There are 12 – 5 = 7 days remaining. 7 days before March 31st is March 24th since 31 – 7 = 24.
2. B. There are 7 days in a week so "1 week and 3 days" is equal to 7 + 3 = 10 days. 10 days before February 14th is February 4th, since 14 – 10 = 4 days.
3. B. There are 7 days in a week so there are 2 × 7 = 14 days in 2 weeks. Therefore, "2 weeks and 5 days" equals 14 + 5 = 19 days. 19 days before December 21 is December 2: 21 – 19 = 2.
4. E. Adding the minutes gives us: 43 + 37 = 80 minutes. Since there are 60 minutes in an hour, we know the runner crossed after 12:00 p.m. Subtract to find the number of minutes past 12:00 p.m.: 80 – 60 = 20. Therefore, the runner crossed the finish line 20 minutes past 12:00 p.m. which is 12:20 p.m.
5. A. Subtract to find the amount Jack needs: $10.00 – $8.65 = $1.35, and $1.35 = 135 cents. A quarter is worth 25 cents so 5 quarters are worth 5 × 25 = 125 cents. He still needs another 10 cents. However, no answer choice with 5 quarters satisfies this. If Jack finds 4 quarters (100 cents), then he would still need 35 cents. 3 dimes are worth 30 cents and 1 nickel is worth 5

cents. The correct combination of coins is 4 quarters, 3 dimes and 1 nickel since 100 cents + 30 cents + 5 cents = 135 cents, and 135 cents = $1.35.

6. D. As a decimal, 80¢ = $0.80. Add the 3 amounts to find their total. When adding money, remember to line up the decimal points. $0.80 + $1.30 + $1.95 = $4.05
7. B. If Jay and Liam each have $10, then they have $10 + $10 = $20 together. Subtract the cost of the popcorn and drinks to find the change. When subtracting money, remember to line up the decimal points. $20.00 – $14.58 = $5.42.
8. B. First, find the sum of Katie's, Adam's, and Lily's money: $4.35 + $1.88 + $2.64 = $8.87. Next, write six dollars and fifty cents as a decimal: $6.50. Last, subtract to find the amount leftover: $8.87 – $6.50 = $2.37.
9. E. Subtract to find the amount Colin needs: $8.90 – $7.35 = $1.55 and $1.55 = 155 cents. A quarter is worth 25 cents so 6 quarters are worth 6 × 25 = 150 cents. He still needs another 5 cents, which is the value of 1 nickel. The correct combination of coins is 6 quarters and 1 nickel since 150 cents + 5 cents = 155 cents and 155 cents = $1.55.
10. D. Subtract to find the amount Ryan will received as change: $10.00 – $9.34 = $0.66, and $0.66 equals 66 cents. A quarter is worth 25 cents so 2 quarters are worth 2 × 25 = 50 cents. He still needs 16 cents. Looking at the answer choices with 2 quarters, we see that 3 nickels (15 cents) and 1 penny (1 cent) equals 16 cents. The correct answer is 2 quarters, 3 nickels, and 1 penny since 50 cents + 15 cents + 1 cent = 66 cents, and 66 cents = $0.66.

## Unit Analysis

**3rd Grade**

1. A. There are 100 centimeters in 1 meter. Since we are converting from centimeters to meters, or a SMALLER unit to a LARGER unit, DIVIDE the number of centimeters by 100 to find the length of the room in meters: 400 ÷ 100 = 4 meters.
2. C. There are 1,000 grams in 1 kilogram, so Judy's 1-kilogram bag of flour is equal to 1,000 grams. Subtract to find how many more grams of flour Samantha bought: 1,800 – 1,000 = 800.
3. A. Since we are converting from pints to gallons, or a SMALLER unit to a LARGER unit, DIVIDE the number of pints by 8 to find the number of gallons Tracy has: 16 ÷ 8 = 2 gallons.
4. C. There are 1,000 milliliters in 1 liter. Therefore, the tank can hold 1,000 × 5 = 5,000 milliliters. To find the number of trips, divide by the size of the jug: 5,000 ÷ 500 = 10.
5. B. There are 1,000 grams in 1 kilogram. Therefore, Toby's backpack has a mass of 1,000 × 2 = 2,000 grams. Subtract to find how much more mass Toby's backpack has: 2,000 – 1,400 = 600 grams.
6. E. There are 1,000 meters in 1 kilometer. Therefore, the racetrack is 1,000 × 4 = 4,000 meters. Then convert to centimeters. There are 100 centimeters in 1 meter. 100 × 4,000 = 400,000 centimeters.

**4th Grade**

1. D. First, convert $3\frac{1}{2}$ into a decimal: $3\frac{1}{2} = 3.5$. There are 1,000 grams in 1 kilogram. Since we are converting from kilograms to grams, or a LARGER unit to a SMALLER unit, MULTIPLY the number of kilograms by 1,000 to find the number of grams: 3.5 × 1,000 = 3,500 grams.
2. D. There are 1,000 milliliters in 1 liter. Therefore, Tim has 4.7 × 1,000 = 4,700 milliliters of juice. Divide by the number of bottles, 10, to get the number of milliliters per bottle: 4,700 ÷ 10 = 470 milliliters.
3. C. Convert any meter measurements into centimeters by multiplying each distance by 100: 0.75 m = 75 cm and 0.82 m = 82 cm. The greatest distance is 90 cm, tossed by Maya.

4. B. First, convert the length of Kirsten's desk to inches. There are 12 inches in 1 foot. Since we are converting from feet to inches, or a LARGER unit to a SMALLER unit, MULTIPLY the number of feet by 12 to find the length of Kirsten's desk in inches: $3 \times 12 = 36$. Next, to find how much wider Mike's desk is, subtract the length of Kirsten's desk from the length of Mike's desk: $40 - 36 = 4$ inches.
5. D. Convert any kilogram measurements into grams by multiplying the mass by 1,000. His math book has a mass of $2.1 \times 1{,}000 = 2{,}100$ grams. His English book has a mass of $3.8 \times 1{,}000 = 3{,}800$ grams. His music book kas a mass of $2.4 \times 1{,}000 = 2{,}400$ grams. Of the given measurements in the question, 1,800 grams is the smallest, so the spelling book has the smallest mass.
6. D. Since there are 12 inches in a foot, 7 feet = $7 \times 12 = 84$ inches. Add the 6 inches to find the number of total inches: $84 + 6 = 90$ inches.

# Statistics & Probability

## Probability

**3rd Grade**

1. D. The letter O appears more times than the letters S, C, H, or L in the word "SCHOOL," so it would have the greatest chance of being selected.
2. C. There are more yellow candies than any of the other colors. Therefore, it is most likely to be chosen.
3. B. There are the only 2 red marbles, which is fewer than any other color. Therefore, it is least likely to be picked.
4. A. There are 3 students whose name begins with "J." Since this is the most frequent letter, it is most likely to occur.
5. B. There is only 1 moon, which is fewer than the other shapes. Therefore, it is least likely to be selected.

**4th Grade**

1. B. Since there are more nickels than any other coin, a nickel has the greatest chance of being selected.
2. D. Since there are more balls of green yarn than any other coin, green has the greatest chance of being selected.
3. B. Although 3 of these states begin with an "I," the family will not visit Indiana, so it cannot be counted which leaved 2 states that begin with an "I." There are 3 states that begin with "M." This is the most frequent letter, therefore a state that beings with "M" is most likely to be selected.
4. C. Because there is an equal number of black squares and white squares on the board, a chip has an equal chance of being on either color.
5. A. There are 10 numbers in the deck: 1, 2, 3, 4, 5, 6, 7, 8, 9. Of the set, 5 are odd numbers, which is greater than any other type of number described. (There are 4 even numbers, 3 multiples of three, 4 numbers greater than five, and 4 numbers less than five.) Therefore, the card he pulls will be most likely to be an odd number.
6. E. Of the five letters A, B, C, D, and E, two are vowels (A and E) and three are consonants (B, C, and D). Since there are fewer vowels than consonants, there is a smaller chance that the letter written on the paper will have a vowel.
7. D. The value and size of the coin does not determine the chance of landing on a head or tail. Each coin has a one head and one tail, so the chances are equal.

8. D. Pepperoni is the most favored topping with 9 votes. Therefore, it is more likely to be a favorite topping.

## Mean

**3rd Grade**

1. C. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. The total number of red cars she saw in 5 days was 60. Divide to find the average: 60 ÷ 5 equals 12.
2. B. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. The sum of all the temperatures 210° and there are 5 cities. Divide to find the average: 210° ÷ 5 = 42°.
3. C. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. It rained a total of 185 inches over 5 years in Willow city. Divide to find the average: 185 ÷ 5 = 37 in.
4. D. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. The total mass of the semi-precious stones is 126 grams and there are 6 semi-precious stones. Divide to find the average: 126 grams ÷ 6 = 21 grams.

**4th Grade**

1. E. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. The total weight of dog that Alex walks is 288 lbs. and there are 8 dogs. Divide to find the average: 288 lbs. ÷ 8 = 36 lbs.
2. B. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. The total weight of the five rocks Ellen has weighed is 85 kg. Divide to find the average: 85 kg ÷ 5 = 17 kg.
3. C. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. It rained for 180 days total over a period of 9 months. Divide to find the average: 180 ÷ 9 = 20.
4. B. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. The Pirates scored a total of 168 points in their 7 games. Divide to find the average: 168 ÷ 7 = 24.
5. D. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. James' 6 friends donated a total of $96. Divide to find the average: $96 ÷ 6 = $16.
6. B. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. The sum of the temperatures of the 5 cities is 360°. Divide to find the average: 360° ÷ 5 = 72°. Please note that we must include all values, including 0, when dividing.
7. C. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. The total annual rainfall in these 7 cities in 301 inches. Divide to find the average: 301 ÷ 7 = 43 inches.

## Interpreting Tables and Graphs

**3rd Grade**

1. B. According to the graph, 12 students have gerbils and 8 students have fish. Subtract to determine how many more students have gerbils than fish: 12 – 8 = 4.
2. E. The bars representing the number of cats and hamsters are the same height. Therefore, students reported the same number of cats and hamsters. Dogs and gerbils are also the same, but that pair is not an answer choice.

3. B. Gordon donated $1,500 and Yoni donated $900. To find the average, add their amounts and then divide by two: $1,500 + $900 = $2,400 and $2,400 ÷ 2 = $1,200.
4. A. Gordon and Julia together donated $1,500 + $1,200 = $2,700, which is more than the other answer choices: Gordon and Alexia donated $2,500; Gordon and Yoni donated $2,400; Alexia and Yoni donated $1,900; and Alexia and Julia donated $2,200.
5. C. "60 or older" includes visitors in the "60-79" and "Over 79" age groups. There were 200 visitors aged 60-79, and 100 visitors over 79. Add to find the total number of visitors 60 and older: 200 + 100 = 300.
6. B. "Older than 19 but younger than 60" includes visitors in the "20-39" and "40-59" age groups. There were 250 visitors aged 20-39 and 300 visitors aged 40-59. Add to find the total number of visitors older than 19 but younger than 60: 250 + 300 = 550.
7. A. Frannyville has 10,000 residents, La Plata has 20,000 residents, and Dennison has 5,000 residents. Add to find their combined population: 10,000 + 20,000 + 5,000 = 35,000.
8. E. Add the populations in each pair and compare to the population of La Plata. Frannyville and Dennison have a combined population of 10,000 + 5,000 = 15,000 people, which is less than the population of La Plata. Therefore, more people live in La Plata than Frannyville and Dennison combined.

**4th Grade**

1. C. Geminex earns $65 million and Rio and Sons earns $135 million. One way to find the amount halfway between the two profits is to find their average. To find the average, add the amounts and then divide by two: $65 million + $135 million = $200 million, and $200 million ÷ 2 = $100 million.
2. D. Add to find the combined profits of Bric a Brac and Caplan: $80 million + $110 million = $190 million. Rio and Sons earned $135 million. Subtract to find the difference: $190 million – $135 million = $55 million.
3. B. To find the average number of points scored by Chen, Lavello, and Patrick, add their points and divide by three: 15 + 31 + 14 = 60 and 60 ÷ 3 = 20.
4. E. In total, the four top-scoring players on the Merry Hawks team scored 24 + 15 + 31 + 14 = 84 points. Since the entire Mooncats team scored 10 more points more than those four players, add 10 to 84 to find the number of points the Mooncats scored: 84 + 10 = 94 points.
5. D. "After 5:00 AM but before 8:01 AM" includes teachers who wake between 5:00-6:00 AM, 6:00-7:00 AM, and 7:00-8:00 AM. Add to find the total number of teachers: 10 + 15 + 25 = 50.
6. C. The most common wake-up time is 7:01-8:00 AM with 25 teachers. The least common wake-up time is before 5:01 AM with 5 teachers. Subtract to find the difference: 25 – 5 = 20.
7. D. "More than 40 hours" includes those who work "41-45" hours, "46-50" hours, and "more than 50" hours. Add to find the total number of employees: 60 + 45 + 20 = 125.
8. C. "0-25 hours" includes employees who work "less than 21" hours and employees who work "21-25" hours. Add to find the number of employees who work 0-25 hours: 10 + 30 = 40. The number of employees who work 36-40 hours is 70. Subtract to find the difference: 70 – 40 = 30.

# Verbal – Synonyms

# 3rd Grade

## Introductory

1. D. A field describes an open area without trees, or a "plain." "Flat" describes a smooth surface, but not necessarily a field, and a valley is the low land between mountains or hills, which is not flat.
2. C. "Center" is a place with equal distance on both sides, or the middle point. "To separate" means "to move apart," but may not be in the "center." "External" means being outside of something, so it is an antonym of "center."
3. A. "Unusual" means not commonly seen or heard, or "rare." The prefix "un-" means not, and the root word "usual" means common. "Ugly" has strong negative connotations and "wonderful" has strong positive connotations, while "unusual" is more neutral. "Everyday" means typical, and is an antonym.
4. C. To "argue" means to tell reasons against something, or "disagree." We do not have to shout to argue. "Approve" means "to accept what another says," so it is an antonym.
5. E. To be "helpful" means that one helps, or is useful, to others. The suffix "-ful" means "full of," which makes the definition "full of help." A friend or servant may be helpful, but "friend" and "servant" are nouns, not adjectives. "Harmful" means "to cause injury," which is an antonym.
6. D. A prank is a mischievous act, or "trick." Playing can involve doing pranks, but does not always. "Mock" means "to ridicule," whereas pranks are not meant to be meanspirited.
7. A. "Leak," or "drip," means that small amounts of liquid are coming out from its container. A "break" means a split, but does not necessarily involve liquids. "Liquid" is a noun, not a verb. To "fill" means to put as much of something into a container as possible, so it is an antonym.
8. C. An "insect" is a small animal with three parts, or a "bug." Ants and spiders are considered types of insects, but are not synonyms for the overall category. An insect is a type of animal, but not all animals are insects.
9. D. To be "wealthy" means that someone has a great deal of money, or is "rich." A person can have some money, dollars, and live with comfort, without necessarily being wealthy.
10. D. "Necessary" means something is essential, or needed. "Survival" is a noun and not adjective. "Extra" means beyond what is needed.
11. A. To "gather" means to bring things together in a group, or "collect." "Choose" implies selecting something and rejecting others, while "gather" is more indiscriminate. "Flowers" is a noun, not verb.
12. B. "Dangerous" describes a situation that can cause harm or injury, or is "risky." The root "danger" means "threatening," and the suffix "-ous" means "full of," which makes the definition "full of threat." A predator is a person that may attack, and it is a noun and not an adjective. If something is protected, it is being covered from injury, so it is an antonym of "dangerous."
13. A. A "label" is a piece of paper with adhesion, or a "sticker." A label may or may not be marked by things like "information" and "price," but the things on the label don't make up the label itself. A package is a box on which a label may be affixed, rather than a synonym for the word "label" itself.
14. D. "Discover" means to see, learn about, or "find." To track, look, and hunt are all acts of searching, but all done before a discovery, so none are synonyms of "discover."
15. C. To "drift," or "float," describes an object moving passively on the surface of water. While something may drift on a river, "river" is a noun, not verb. "Paddle" is an active motion, unlike "drift," which is more passive.
16. D. "Furious" means violent passion and outrage, or "angry." The root "fury" means violent anger, and the suffix "-ous" means full of, which makes the definition "full of violent anger." Furious is a type of feeling, but not all feelings are "furious." Sometimes, being furious makes someone fast,

but being fast is not the same as being furious. Being "calm" describes someone without excitement, and is an antonym of "furious."

17. E. "Crumple" means to press or bend out of shape, or "wrinkle." Though one may crumple paper, "paper" is a noun, not verb. To "rip" means to cut or tear apart, and is a different action from "crumple."
18. C. "Swift" is another word for "fast." Though words like "wind" and "speed" are associated, they are nouns and not adjectives. "Slow" is an antonym of "swift."

## Intermediate

1. D. A "belief" means an opinionated insight, or "thought." Though a belief may be religious, "religious" is an adjective, not noun. A "proverb," or saying, may or may not reflect the beliefs of the speaker.
2. B. To "poke" means a quick thrust, or "jab." Though associated with the action of poking, "hole" and "finger" are both nouns, not verbs. To "tickle" usually describes a light touch, is not the same as to "poke."
3. D. "Coast," or "shore," describes the land by a body of water. The "ocean" is the water that comes up to the shore, and not the shore itself. A "cliff" describes a very steep, overhanging of rock, which is different from a "coast."
4. E. A "riddle," or a "puzzle," is something intended to be solved. A trickster may tell a riddle, but "trickster" refers to a person, not a statement. A "lullaby" is meant to soothe, not to be solved.
5. A. To "defend" means to protect, or "guard." Though associated, "champion," or hero, and a "challenger," or opponent, are both nouns and not verbs. "Defeat" means "beat," and is an antonym of "defend."
6. B. To "revise" means to make changes, or "rewrite." The suffix "re-" means again. When modifying "write," it shows the action of writing is happening again. For "writer," the suffix "-er" connects a person with the action of writing, which makes "writer" mean "person who writes." The same applies to the suffix "-or" when added to edit, which makes "editor" mean a person that edits. As both are people, or nouns, they cannot by synonyms to "revise," which is a verb.
7. D. "Intelligent" means showing good understanding, being smart, or "brainy." Performance in school and good grades may indicate if a student is intelligent, but both "school" and "grades" are nouns rather than adjectives. "Slow" can mean not showing quickness of mind, so it is an antonym of "intelligent."
8. B. An "opinion" is someone's judgement, or "view." Someone may try to persuade or argue against an opinion, but "persuade" is a verb, not a noun. A "fact," or objective piece of information, is an antonym of "opinion."
9. A. A "poster," or picture, is a vivid graphic expressing an idea. A "board" is something a poster may be attached to. Though a printer is responsible for publishing posters, it is an associated word instead of a synonym. A "booklet" usually contains graphics and text on multiple pages, instead of being a single image.
10. E. "Contain" means to keep an object or objects in an area, or "hold." "Within" describes where, so it is an adverb and not a verb. A "container" and "cart" can be used to "contain," but they are not synonyms., and to "release" means to set free, which is an antonym of "contain."
11. D. A globe is a round object, or "sphere." "Earth" and "moon" are specific round objects, whereas a globe can be any round object, so they are not synonyms.
12. A. "Certain," or "positive," is strongly believing that one is correct. "Know" is a verb that means to be sure of something, but "certain" is an adjective that describes someone who knows something. "Unsure," or lacking confidence, is an antonym of "certain."
13. E. "Partly" describes something not complete, and means the same thing as "incompletely." The root "part" means a portion, and suffix "-ly" means characteristic of, which means "partly" specifies that an action is only partially complete. Similarly, the prefix "in-" negates the root

word, "complete," making the meaning "an action that is not complete." A "piece," or a part, is a noun and not an adverb. "Completely" and "totally" are both antonyms of "partly."

14. C. A disease means that someone is ill, or has a "sickness." The suffix "-ness" means "state of," which makes "sickness" mean "the state of being sick." Someone with a disease may be described as "unwell" or "unhealthy," but both are adjectives and not nouns.
15. D. To "repair," or fix, means "to get working again." The suffix "re-" means "again," and the root "pair" comes from "prepare," which means "to put in the right condition." "Combine," or put together, connects to "pair" but not "repair." "Destroy" is an antonym.
16. D. "Nervous" means feeling irritated, unable to sit still, or "jumpy." The suffix "-ous" means "full of," and the root "nerve" describes the body system of impulses, which makes the meaning "full of impulses." Though commonly associated, the word "brain" is a noun, not adjective. "Eager" is a positive, excited feeling, so it is an antonym of "nervous."
17. A. A "community," or "group," is several people with a common goal. A member is an individual, not group. Not everyone in a community may feel a sense of "friendship" with each other.
18. B. "Bother," or annoy, means "to tease or pick on someone." Though "brother" and "bother" look similar, they do not mean the same thing. "Distressed," or upset, is an adjective and not a verb. To "ignore," or overlook, is an antonym of "bother."

## Advanced

1. C. A "gust," or puff, is a sudden burst of air. "Stormy" and "windy" are both adjectives, but "gust" is a noun.
2. D. "Ancient" describes an artifact, religion, or belief from a long time ago, and is another word for "old." "Past" means anything that happened previously, and could refer to either the recent past or a further past. "Ruins" describes something in fragments or rubble, and is a noun rather than an adjective.
3. C. "Hardly" means lightly, almost, or barely. Despite also ending in "-ly," "only" means "one," and is not a synonym. "Strongly" and "sturdily" refer to toughness and strength, which are antonyms of "hardly."
4. A. A "coward," or wimp, is someone that lacks courage or is timid. People in a scary situation may feel like a coward, but "scary" is an adjective, not noun. A brave, or courageous, person is the antonym of "coward."
5. E. To "examine" means to investigate and evaluate, or review. A doctor will examine a patient, but "doctor" is a noun, not verb. "Concentrate" means to ponder and think, and is not a synonym.
6. D. "Typical" means the same thing as common, or "ordinary". The suffix "-ic" and "-al" mean "having characteristics of," and the root "type" means "a member in a class or group," which makes the meaning "having common characteristics with members of a group." The prefix "un-" means "not," so "unlikely" means "not likely," and "uncommon," or not common, is an antonym of "typical."
7. E. "Explore," or seek, means to examine closely for information. The suffix "-er" modifies the root word "explore" into a noun describing a person, so "explorer" means the person who explores, and is no longer a verb. "Pilot" is also a noun, and the verb "explain" means to give details, which is not a synonym.
8. C. "Agreeable" is another word for pleasant, or nice. The suffix "-able" means "given to," and the root "agree" means "having the same views or emotions," which makes the definition "given to the same emotions." While a person can be agreeable, "person" is a noun, not adjective.
9. A. "Capture," or catch, is another word for seize. Though a hunter catches things, "hunter" is a noun, not verb. One can only keep something after it is caught, so they are not synonyms.

10. C. “Vanish,” or disappear, means to move quickly from sight. An “illusion” or a misleading movement, is a noun and not a verb. If something is faded, people can still see it faintly, whereas something that has vanished can no longer be seen at all.
11. E. A shelter, or shack, is a building that protects things from the elements. A shelter may help someone feel safe, but “safe” is not a synonym. The suffix “-less” means without, so “homeless” means “without a home,” and is an antonym.
12. B. “Restless” means unable to be still, or “active.” The suffix “-less” means “without,” and the root “rest” means “sleep” or “peace,” which makes the definition “without rest or peace.” A runner is in continual motion, but “runner” is a noun, not an adjective. Motion” is a verb, not an adjective. “Peaceful” is an antonym.
13. A. To observe means to watch closely, or “notice.” Though “science” and “telescope” are associated words, they are nouns, not verbs. If someone is absorbed, they are deeply involved instead of simply watching.
14. E. “Exact” means “precise.” In math, “rounded” and “estimated” both mean “approximated,” so they are antonyms to “exact.”
15. C. To “understand” means to think about and learn, or “grasp,” an idea. “Insight” is a noun, not verb. “Confused” is an antonym.
16. B. To “persuade,” or “convince,” means to plead your case. An essay may be, but does not have to be, persuasive. “Believe” means to think something; not everyone attempts to persuade others of their own beliefs.
17. A. “Magnificent” is another word for extremely beautiful. “Evil” is a very negative word, unlike the implication of admiration in “magnificent.” “Dull,” or boring, is an antonym.
18. D. “Additional” means “more,” or extra. The suffix “-al” means “having the form of,” making the meaning “having the form of adding on.” Though the base word “addition” is associated with mathematics and equations, “additional” does not share the same meaning.

# 4th Grade

## Introductory

1. B. “Ordinary” means holding no special meaning, or “usual.” We may describe a person as “ordinary,” but they are not synonyms. “Amazing,” or wonderful, is an antonym of “ordinary.”
2. E. To “provide” means to “give.” Someone may command, or order, another person to give something, but “command” can be used in many other contexts, and is not a synonym to “provide.” “Get,” or receive, is an antonym.
3. A. “Recently” means not long past, or “lately.” Although a memory will have occurred during “previous” times, “previous” could mean a long time ago or “recently;” so it is not a synonym. “Memory” is a noun, not adverb.
4. D. A “blossom” is another name for a “flower.” Some plants will produce petals, while other plants produce grains, but “grain,” “petals,” and “blossom” are referring to different parts of the plant.
5. E. “Content” can mean “satisfied,” or “happy.” “Content” can also mean “the things contained in something,” but “outside” is an antonym for this meaning. Similarly, a book might have content inside it, but a book is not synonymous with its content. Lonely has a negative connotation and so cannot mean “content” or “happy,” and table is a completely unrelated word.
6. B. “Entire” means having no part left out, or “whole.” The “world” is only one type of “whole,” and the two are not synonymous. “Partial,” or half, is an antonym of “entire.”
7. A. A “country” is a governed group of people, or a “nation.” A “continent” may hold several countries, and a “citizen” is a resident of a “country,” but they are not synonymous.
8. B. To “survive” means to remain alive, or “live.” Although we need to breathe and have water to survive, they are associated words, not synonyms.

9. E. To be "drowsy" means "ready to fall asleep," or "sleepy." The suffix "-y" means "inclined," which makes "sleepy" mean "inclined to sleep." Though some medicines will make us feel like we will faint, or blackout, it is not the same as falling asleep, so it is not a synonym. "Medicine" is also a noun, not an adjective.
10. E. A "quantity" means a number, measure, or "amount." "Quality" means how well-made something is, rather than the number of items. And while individual items make up an amount, an "item" is not a synonym. "Plenty," or a lot, is an example of a quantity but cannot be used as a synonym for "quantity."
11. C. A blizzard is a severe snowstorm. Although "white," "windy," and "freezing" are all descriptors of blizzards, they are adjectives and not nouns, are not synonyms.
12. A. A concept is a theory, or an idea. A "question" or a "project" will require us to come up with an "idea," but neither are synonyms of "concept."
13. D. To "select" means to pick a specific piece, or "choose." We select for the best, but "best" is an adverb, not verb. To "weed" means "pulling the worst items," which makes it an antonym of "select."
14. A. To "reveal" means to relate a detail, or "tell." We may reveal a secret, but "secret" is a noun, not verb. "Deny" means refuse, and is not a synonym.
15. B. To be confident means to be certain, or "sure." Being "noble" means being "decent and respectable," which is not a synonym for "confident." "Afraid," or fearful, is an antonym.
16. A. A "threat" is a feeling that something intends harm, or "danger." A bully may be a type of threat, but threats can come in many forms, and are not isolated to only bullies. Though a threat may feel frightening, "frightening" is an adjective and not a noun.
17. E. A "debate" is a disagreement, or an "argument." A "brawl" means a disagreement that includes a physical fight, whereas a "debate" is more reserved and only verbal.
18. B. "Envy" is a synonym for "jealousy," or wanting what someone else has. Although it is a type of emotion, not all emotions are synonymous with envy. "Clingy" means possessive, or unwilling to let someone go; it does not mean the same thing as "envy."

## Intermediate

1. E. "Heroic" describes brave, or courageous, acts. The suffix "-ic" means characteristic of, which makes "heroic" mean "characteristic of a hero." Although we associate "powerful," dramatic," and "superman" with heroic acts, they are not synonyms. "Weak," or feeble, is an antonym.
2. C. An "exhibit" means a visual show, or "display." We go to a museum to see exhibits, and an exhibit may show art, but neither "art" nor "museum" are synonyms.
3. D. "Alternate" means different, or "another." "Repeat" means to do or say something again, so it is not a synonym of "alternate." "Twin" means "same," which makes it an antonym.
4. C. A "companion" is someone or something that shares in a relationship or activity, or a "partner." A dog or a sibling can both be companions, but they are specific types, rather than synonyms. A "foe," or rival, works against a person, which makes it an antonym of "companion."
5. B. "Tragic" means extremely unpleasant and awful, or "sad." A "poem" may be "tragic," but it is a noun and not an adjective. The suffix "dis-" means "not" or "reverse of," so "disappointing" means not encouraging; but it is not as extreme as "tragic."
6. B. "Crave" means a deep desire that feels like a need, or "want." When we are hungry, we may crave food, but "hungry" is an adjective while "crave" is a verb.
7. A. "Permit," or "allow," means "to let something happen." "Improve" means to make better, and is unrelated to permission. "Ban" means "forbid," so it is an antonym.
8. A. To experiment, or to test, means to try out in order to discover. A scientist will experiment in his or her lab, and an idea is the cause of an experiment, but none of these are synonyms to the question word.

9. E. “Request” means to ask for something, or “plea.” A request may take the form of a “question,” but not all questions are requests. A refusal is a rejection, which is an antonym of “request.”
10. B. “Impact” means the striking of one to another, or “crash.” An “impact” may create a “powerful” “boom,” but “boom” is a sound caused by an “impact,” not the impact itself. “Tap” is too light of a motion to be synonymous for “impact.”
11. C. “Anxious” means nervous, or “worried.” We may “fidget,” or squirm, when we feel nervous, but these are verbs, while “anxious” is an adjective. “Overjoyed,” which means extremely happy, is an antonym of “anxious.”
12. C. To “claim” means to state, or “say.” Someone may respond, or reply, to a claim, or they may reject the claim, but these all describe actions in response to a claim, rather than being synonyms.
13. D. A “mansion” is a large, stately home, or “house.” Though a celebrity may live in a mansion, “celebrity” refers to a person and not a house. And while a mansion is generally expensive, “expensive” is an adjective, not noun. “Hut,” or shack, is an antonym of “mansion.”
14. A. “Modest,” or “shy,” means unsure. “Modern” describes something that is new or fresh, so it is not a synonym; and “crazy,” or wild, would be an antonym of “modest.”
15. D. A “disaster” is a misfortune, or “tragedy.” A person will feel unlucky when a disaster happens to him or her, but “unlucky” is an adjective, not noun. A “blessing” is equivalent to a miracle, so it is an antonym. An earthquake is a type of disaster, but not all disasters are earthquakes.
16. E. A competition is an event where people compete against one another, or a “contest.” While a racer participates in a competition, “racer” refers to a person and not an event. A “meeting,” or assembly, is not necessarily competitive.
17. C. To “transform” means to change, make over, or “alter.” “Differ” means “to be different,” but does not mean that a change has occurred. When we “maintain,” we try to keep the same, so it is an antonym.
18. B. A routine is a repeated action or series of actions, or a “pattern.” Although one repeats a routine, “repeat” is a verb, not a noun. “Extraordinary” is an antonym for the other meaning of “routine,” or “normal.” People often follow a routine in the morning, but “morning” is simply an associated word.

## Advanced

1. D. “Circular” means having the form or a circle, or “round.” A ball or a coin can both be described as circular, but “ball” and “coin” are both nouns, not adjectives. “Straight” is an antonym of circular.
2. E. “Achievement” means reaching a successful end, or “accomplishment.” The suffix “-ment” means state of, and the root “achieve” means successful end, which makes “achievement” mean the state of bringing to a successful end. Though we may hold a “celebration,” or party, once we reach an achievement, it is not a synonym. A “score” can be used as a measure of achievement, but not all achievements can be measured this way.
3. A. “Numerous” means existing in great quantity, or “many.” A handful means “an amount that will fit in one’s hand,” which is not necessarily a large number. “Few” is an antonym of “numerous.”
4. C. “Practically” means as good as, virtually, or “basically.” Though “slightly” also ends with “-ly” and is an adverb, it means “somewhat,” and is not a synonym. “Already” means “beforehand” and so is not a synonym.
5. A. “Elderly” means advanced in years, or “aged.” The suffix “-ful” means “full of,” and the base word “elder” means person who is older. Though a grandparent may be elderly, “grandparent” is a noun, not adjective. “Youthful” means “full of youth,” making it the antonym of “elderly.” Older people are often considered wise, but being wise is not the same thing as being old.

6. D. “Nonsense” means something that does not make sense, or “gibberish.” The prefix “non-” negates the base word, “sense.” When people speak nonsense, it may create confusion, but “confusion” refers to the resulting feeling and is not a synonym. Someone may call something nonsensical “garbage,” but garbage is a metaphor to convey the meaning that something is nonsensical, and is not a synonym itself.
7. C. “Peculiar” describes something as odd, unique, or “strange.” Not all “interesting” things are peculiar, and “annoying,” which means “irritating,” has negative connotations that “peculiar” does not share.
8. C. “Unfamiliar” means new, untried, or “alien.” “Stranger” is a noun, not adjective. “Convention” means “rule” or “norm,” and the suffix “-al” means “of the kind,” so “conventional” means “of the norm,” which makes it an antonym for “unfamiliar.” Similarly, to be close to someone means being familiar with them, so “close” is also an antonym.
9. A. “Effortless” means unforced, natural, or “easy.” The suffix “-less” means without and the root “effort” means work, which makes “effortless” mean “without work.” “Ready” is an associated word, but not a synonym. “Demanding” is an antonym.
10. E. “Abroad” means in a far-away foreign country, or “overseas.” Though “aboard” looks similar, it means “on” and is not a synonym. “Abroad” is not to be confused with “broad,” or wide.
11. B. “Impressive” means extraordinary, or “remarkable.” Although “awe” and “impressive” relay wonder, “awe” is a noun, and “impressive” is an adjective.
12. C. “Silently” means without a sound, or “soundlessly.” The suffix “-less” means without and the “-ly” suffix changes the base word “soundless” from adjective to an adverb, which makes “soundlessly” an adverb that means “without sound.” Though “definitely,” or certainly, and “loudly” are both adverbs, their meanings are not synonymous with “silently.” In fact, “loudly” is an antonym.
13. A. “Rarely” means hardly ever, or “infrequently.” The prefix “in-” means not, the root “frequent” means “happening at short intervals,” and the prefix “-ly” changes it from an adjective to an adverb, which makes “infrequently” mean “not occurring in short intervals.” Though it is also an adverb, “oddly” means strangely, and is not a synonym. “Often,” or happening frequently, is an antonym.
14. C. “Cautious” means watchful for danger, or “careful.” The suffixes “-ous” and “-ful” both mean full of, which makes “cautious” mean full of caution and “careful” full of care. “Daring,” or brave, is an antonym of “cautious.”
15. D. To “protest” means to complain, or “disagree.” The suffix “dis-” means not, which makes “disagree” means “to not agree.” Although “annoyed” and “protest” both have a negative connotation, with “annoyed” the complaining is internal and “protest” the complaining is external. “Agreement” is an antonym.
16. E. “Exterior” means outer surface or walls, or “outside.” “Wall” and “shell” are words that are commonly associated with “exterior,” but are only examples of “exterior” rather than synonyms of “exterior.”
17. D. A “meadow” is usually a flat grassy section of land, or “prairie.” Though a meadow contains grass, “grass” is a specific plant and not synonymous with “meadow,” which can contain many different plants. A “forest” contains trees and is not flat.
18. B. “Valiant” means “full of valor,” or “heroic.” The base word, “valor,” means “courage,” and the suffix “-ant,” which means “characteristically of,” transforms the word into an adjective. Similarly, the suffix “-ic” also means “characteristically of,” and modifies the base word “hero” by transforming it into an adjective. Although “modest” (shy) and “crafty” (tricky) are also both adjectives, they do not share the same meaning as the question word. “Deviant” is an antonym of “valiant.”

# Verbal – Analogies

## Guided Practice – Antonyms

**3rd Grade**

1. D. "Amusing" means interesting, which is the opposite of "boring," making this an antonym analogy. Similarly, "delicate," or easily breakable, and "strong" are also opposites. "Swimming" and "bathing" are two different activities, but they are not antonyms.
2. E. "Final" means last, which is the opposite of "first," making this an antonym analogy. Similarly, "brief," or short-lived, and "long" are opposites also. Though different, "start" and "middle" are not the opposite extremes, so they are not antonyms.
3. D. "Scowl" means frown, which is the opposite of "grin," making this an antonym analogy. "Disgusting," and "tasty" are also opposites. A "smile" is a type of "expression," but they are not antonyms.
4. D. "Flood" means abundance, which is the opposite of "drought," making this an antonym analogy. "Smooth," or flat, and "bumpy" are also opposites. "Water" is part of an "ocean," which is the incorrect analogy structure.
5. C. "Artic" means freezing, which is the opposite of "baking," or hot, making this an antonym analogy. "Light," and "dim," or dark, are also opposites. "North" is a type of "direction," which is the incorrect analogy structure.
6. D. "Entrance" means a place of entry, which is the opposite of "exit," making this an antonym analogy. "Bare," or unadorned, and "covered" are also opposites. "Bald" and "bare" are synonyms.

**4th Grade**

1. C. "Aloft" means "upward," which is the opposite of "grounded," making this an antonym analogy. The suffix "un-" means "not," so "unable," or "not able," means the opposite of capable. All the other options are synonyms to each other.
2. E. "Destructive" means "damaging," which is the opposite "creative," making this an antonym analogy. "Lovely," or pretty, and "dowdy" are also opposites. All the other pairs are closely related as synonyms.
3. A. "Dormant" means "inactive," which is the opposite of "active," making this an antonym analogy. The prefixes "in-" and "un-" both mean "not," so "inactive" means "not active," and "uninterested" means "not interested." Therefore, "eager," or excited, and "uninterested" are also opposites. "Coax," or "to persuade," and "convince" are synonyms, as are "monarch" and "royalty." "Hibernate" means "to lie dormant," and is only associated with "winter."
4. D. "Humble" means "shy and unpretentious," which is the opposite of "conceited," making this an antonym analogy. Similarly, "difference," or adjustment, and "similarity" are also opposites. Though "polite" and "courteous" are both adjectives, they are not an antonym pair. "Debt," or bill, and "borrow," or lend, are commonly associated but not antonyms.
5. D. "Confuse" means "to complicate," which is the opposite of "simplify," making this an antonym analogy. "Vertical" (straight up and down), and "horizontal" (flat) are also opposites. "Short" and "wiggly" may be associated with "vertical," but they are not antonyms.
6. A. "Weary" means "tired," which is the opposite of "energetic," making this an antonym analogy. Similarly, "reveal" means to show what was previously hidden, so it is the opposite of "mask," or "hide." Though one reveals a secret, "secret" is not a verb.

## Guided Practice – Characteristic

**3rd Grade**

1. D. Glass may be described, or characterized as "clear," so this is a characteristic analogy. Similarly, roads are generally flat. Although displays are part of a museum, and an eye is a part of one's face, these are in the incorrect analogy structure.
2. C. An elephant may be described, or characterized as "enormous," so this is a characteristic analogy. Similarly, hamsters are generally furry. Although a fire may be searing hot, the order is reversed from the original structure, and "big" and "tiny" are antonyms, which is the incorrect analogy structure.
3. E. A canyon may be characterized as "deep," so this is a characteristic analogy. Similarly, clouds are often fluffy. Although an animation may be charming, and "squeaky" can describe a mouse, the order in both are reversed from the original structure.
4. D. A watermelon is often characterized as "juicy," so this is a characteristic analogy. Similarly, a rainbow is colorful. Although a boulder, or rock, is solid, the order is reversed from the original structure.
5. A. A maze is characterized as being "confusing," so this is a characteristic analogy. Similarly, a beach is wet from seawater. Although "sand" and "island" are words often associated with "beach," they are neither feelings nor adjectives.
6. B. Windows are generally characterized as "transparent," so this is a characteristic analogy. Similarly, tentacles are usually characterized as "slimy." Although a tentacle is a part of an octopus, that is the incorrect analogy structure.

**4th Grade**

1. A. A holiday may be characterized as "festive," so this is a characteristic analogy. Similarly, liquid is generally described as "wet." All the other answer options have the order reversed from the original structure.
2. E. The sun may be characterized as "radiant," making this a characteristic analogy. "Foliage," or the leaves of plants, is generally green. Not all stories are mysteries, and "darkness" is not a characteristic of "daylight."
3. E. A pie may be characterized as "crusty," so this is a characteristic analogy. Similarly, a host is usually gracious. "Relaxation" is a noun, not an adjective, and is an association but not characteristic of "vacation." While food can be delicious, the order of the words is reversed from the original structure.
4. A. A city may be characterized as "bustling," so this is a characteristic analogy. Similarly, an orchestra usually sounds "harmonic." Though a mountain may be massive, the order of the words is reversed. A gust of wind will appear in a hurricane, but "gust" and "hurricane" are associated words, and not a characteristic of the other.
5. C. An enemy is characterized as being "hostile," making this a characteristic analogy. A "quilt" is "warm." Though a "quilt" has "color," it is characterized as being colorful.
6. B. A pole is characterized as "thin," (the wider equivalent would be called a column) making this a characteristic analogy. Similarly, a thief is generally quiet. Though an individual thief may be wise, "wise" is not a characteristic associated with thieves in general.

## Guided Practice – Part to Whole

**3rd Grade**

1. A. A petal is a part of a rose, so this is a part/whole analogy. Similarly, an employee is only one of many in a company. In all the other options, though the words are still relating as wholes and parts, the order is reversed from the original structure.

2. B. A bird is a part of a flock, so this is a part/whole analogy. Similarly, a word is a part of a sentence. In all the other options, though the words are still relating as wholes and parts, the order is reversed from the original structure
3. D. An individual is part of a group, so this is a part/whole analogy. Similarly, a book is a part of a stack. In all the other options, though the words are still relating as wholes and parts, the order is reversed from the original structure.
4. E. A zipper is a part of a jacket, so this is a part/whole analogy. Similarly, a stamp is one of many in a collection. While a child may be younger than their guardian, a child is not a literal part of their guardian. Though an elbow is part of an arm, the order is reversed from the original structure.
5. C. A tip is part of a highlighter, so this is a part/whole analogy. Similarly, a heel is a part of a boot. All the other options do not make a whole.
6. A. A member is a person who is part of a tribe, so this is a part/whole analogy. Similarly, a "feather" is part of a wing. A bat does not have feathers.

**4th Grade**

1. A. A paragraph is part of an essay, making this a part/whole analogy. Similarly, a continent is part of the Earth. Though a ship is part of a fleet, the order of the words is reversed from the original structure. "Luck" may be a causal factor in making a fortune, but it is not literally a part; a part of "fortune" would be "dollar."
2. E. A bee is part of a swarm, making this a part/whole analogy. Similarly, a bristle is only one part of a brush. Though a machine is part of a factory, and a puppet may be part of a show, the whole is mentioned before the part, making the structure reversed.
3. A. One person is a part of a crowd, making this a part/whole analogy. Similarly, a letter is only one part of an alphabet. Though a knob is part of a door, the whole is mentioned before the part, making the structure reversed. A calf is related to a bull, but that is not the same relationship.
4. A. A limb is part of a body, making this a part/whole analogy. Similarly, a shirt is only one part of a wardrobe, which means "collection of clothes." A stage is a part of a whole cycle, and a string is part of a kite, but the whole is mentioned before the part in both analogies, making the structure reversed.
5. E. A musician is part of a band, making this a part/whole analogy. Similarly, a leg is part of a table. Though words like "ankle" and "foot" are associated with the question word, "leg" does not relate to them as a part to whole.
6. C. A planet is a part of a galaxy, making this a part/whole analogy. Similarly, an ant is a part of a colony. Although an ant is characteristically "small," that is the incorrect analogy type.

## Guided Practice – Uses

**3rd Grade**

1. B. A fan is used to cool, so this is a uses analogy. Similarly, a shield is used to protect. Though weights are used to lift, and one may transfer cargo, the order is reversed from the original structure in both these options.
2. C. A mirror is used to reflect, so this is a uses analogy. Similarly, a cable is used to connect things. "Bathroom" and "basement" are both nouns, and neither describes what the other is used for.
3. A. A rollercoaster is used to thrill a person, so this is a uses analogy. Similarly, a prank is used to fool a person. Though a nightmare terrifies, and a dam is used to block, the order is reversed from the original structure in both these options.

4. B. A sandbox is used to entertain, so this is a uses analogy. Similarly, one uses one's lungs to breathe. Though gum is used to chew, the order is reversed from the original structure. "Diamond" and "gold" are related but do not describe each other's uses.
5. C. Soap is used to clean, so this is a uses analogy. Similarly, notes are used to study. Notes may be removed, but "notes" do not serve the primary purpose of removal. All the other options to do not show a use, or verb.
6. E. Ink is used to write, so this is a uses analogy. Similarly, markets are used to sell things. Although a market may be described as "bustling," that is the incorrect analogy structure.

**4th Grade**

1. E. A teaspoon is used to stir, so this is a uses analogy. Similarly, a parade is used to celebrate. Though one may use a vacuum to clean and a speaker to inspire, the order is reversed from the original structure.
2. C. A game is used to entertain, so this is a uses analogy. Similarly, a mural, or a wall painting, is used to decorate. Though enjoyment and displease follow the noun to verb structure, "enjoyment" is not an object. "Board" sounds the same as "bored," so it is a homonym analogy, which is the incorrect structure.
3. A. A telephone is used to communicate, so this is a uses analogy. Similarly, a flashlight is used to illuminate. Though one may use a scale to weigh things, and a bulletin to announce, the order is reversed from the original structure.
4. A. A bulldozer is used to crush, so this is a uses analogy. Similarly, a lullaby is used to soothe. Though one may use a microphone to record and chopsticks to eat, the order is reversed from the original structure.
5. B. Chairs are used to sit in, so this is a uses analogy. Similarly, a satchel is used to carry. Though a backpack is similar to a satchel, "backpack" does not describe what a satchel is used for. Additionally, though "drop" is a verb, one does not usually try to drop a "satchel."
6. D. Magnets are used to attract other magnetic objects, so this is a uses analogy. Similarly, letters are used to communicate information. Though one may expect a letter, "expect" does not describe what letters are used for.

## Guided Practice – Users

**3rd Grade**

1. D. A firefighter uses a hose, so this is a users analogy. Similarly, a mechanic uses a wrench. Though a firefighter fights flames, "blaze" and "flames" are synonyms, which is the incorrect analogy structure.
2. E. A catcher uses a mitt, so this is a users analogy. Similarly, a banker uses cash. Though a seamstress uses a needle, the order is reversed from the original structure.
3. C. A farmer uses a plow, so this is a users analogy. Similarly, a dentist uses a drill. Though an engineer uses a toolbox, the order is reversed from the original structure.
4. D. A mailman uses a uniform, so this is a users analogy. Similarly, a mathematician uses a calculator. Though an astronomer uses a telescope and a programmer uses code, in both pairs the words are reversed from the original structure.
5. A. An astronaut uses a helmet, so this is a users analogy. Similarly, a waiter uses a tray. Though a restaurant and breakfast relate to tray, neither are nouns describing people, so they do not have the correct analogy structure.
6. C. A person from royalty uses a crown, so this is a users analogy. Similarly, a tourist uses a suitcase in their travels. Though a queen or a poet may have a suitcase, the latter are not necessary objects for those roles.

**4th Grade**

1. A. An acrobat uses a tightrope, so this is a users analogy. Similarly, a lifeguard uses a whistle. Though a plumber used a plunger, the order is reversed from the original structure. A person uses a crayon to create a drawing, but that is not the correct analogy structure.
2. D. A photographer uses a camera, so this is a users analogy. Similarly, a pedestrian, or walker, uses a sidewalk. Though a captain may use an anchor, the order is reversed from the original structure. Lens may help create to film effects, but that is not the correct analogy structure.
3. C. A barber uses scissors, so this is a users analogy. Similarly, an archer uses an arrow. Though a saw is used to hack and a razor is used to shave, each pair does not have the correct analogy structure.
4. E. A diver uses flippers, so this is a users analogy. Similarly, a professor uses a textbook. A trader may shop for bargains, but that is not the correct analogy structure.
5. B. A nanny uses a stroller, so this is a users analogy. Similarly, a pilot uses a plane. Though runway, wing, and airport relate to plane, none are people so they do not have the correct analogy structure.
6. D. An explorer uses an atlas, or map, so this is a users analogy. Similarly, a knight uses a sword. Police officers do not carry swords as part of their jobs, nor do nurses.

## Guided Practice – Category

**3rd Grade**

1. C. A lizard is a type of reptile, which means this is a category analogy. Similarly, French is a type of language. A toad is a type of amphibian, and spotted may describe a type of gecko, but the order is reversed from the original structure in both pairs.
2. B. Earrings are a type of jewelry, which means this is a category analogy. Similarly, a beetle is a type of insect. Though pepper is a type of seasoning, the order is reversed from the original structure.
3. E. A tree is a type of plant, which means this is a category analogy. Similarly, a flute is a type of instrument. A doll is a type of toy, and a truck is a type of vehicle, but both pairs have words in a reversed order from the original structure.
4. A. A crossword is a type of puzzle, which means this is a category analogy. Similarly, anger is a type of emotion. Shrimp is a type of seafood, but the order is reversed from the original structure.
5. D. Salty is a type of flavor, which means this is a category analogy. Similarly, plastic is a type of material. Wood is another type of "material," but "plastic" and "wood" do not have the correct analogy structure.
6. C. A smile is a type of facial expression, which means this is a category analogy. Similarly, May is a specific month. May does not fall under the categories of "movement" or "space."

**4th Grade**

1. B. A poodle is a type of dog, which means this is a category analogy. Similarly, a valley is a type of landform. Yogurt is a type of dairy, but the order is reversed from the original structure. Though a pet can be a helper, the order is reversed from the original structure.
2. D. Steel is a type of metal, which means this is a category analogy. Similarly, a pigtail is a type of hairstyle. Copper is not a type of brown. Third is a type of prize, but the order is reversed from the original structure.
3. D. Yellow is a type of color, which means this is a category analogy. Similarly, a milkshake is a type of beverage. Though iron is a type of mineral, and history is a type of subject; both pairs have the order reversed from the original structure.

4. E. A fork is a type of utensil, so this is a category analogy. Similarly, a comma is a type of punctuation. A bike is a type of transportation, and a heart is a type of organ, but both pairs of words are in reversed order from the original structure.
5. D. Autumn is a type of season, so this is a category analogy. Similarly, a screwdriver is a type of tool. Though the words "nails," "handyman," and "fix" are all associated, none of them describe a category that "screwdriver" belongs to.
6. E. Owls are a type of bird, just as salmon are a type of fish, so this is a category analogy.

## Guided Practice – Product/Producer

**3rd Grade**

1. A. A poet creates, or produces, a poem, so this is a product/producer analogy. Similarly, a sculptor produces statues. Though a writer produces literature, the order is reversed from the original structure.
2. A. A flower produces nectar, so this is a product/producer analogy. Similarly, a cow produces milk. Though a blossom produces pollen, the order is reversed from the original structure.
3. C. A painter creates, or produces, art, so this is a product/producer analogy. Similarly, a baker produces bread. Though a pianist produces melody and a maid produces cleanliness, both pairs have the order reversed from the original structure.
4. B. A cameraman produces a video, so this is a product/producer analogy. Similarly, a hairstylist produces, or creates, a hairdo. A jailer uses, but does not produce, keys, and there is no noun describing a person in the analogy "filming is to camera."
5. A. A locksmith produces a key, so this is a product/producer analogy. Similarly, a tailor produces a suit. A tuxedo is a synonym for "suit," rather than its producer.
6. D. A toymaker produces a doll, so this is a product/producer analogy. Similarly, a witch produces spells. Spells are not produced by officers or salesmen.

**4th Grade**

1. D. A carpenter creates, or produces, furniture, so this is a product/producer analogy. Similarly, a florist produces a bouquet. A violinist creates harmony and a monk creates a prayer, but both analogies are in reversed order from the original structure.
2. D. A jeweler creates, or produces, a ring, so this is a product/producer analogy. Similarly, a doctor produces a diagnosis. A cellist uses, rather than produces, a cello; similarly, a foreman uses, rather than produces, a clipboard. A marriage occurs *in* a church, rather than being produced *by* the church.
3. A. A magician produces a trick, so this is a product/producer analogy. Similarly, a researcher produces research. Though a mom may give birth to an infant, the order is reversed from the original structure.
4. B. A director produces a movie, so this is a product/producer analogy. Similarly, a reporter produces articles. "Helpful" is an adjective, not noun.
5. E. An editor helps produce a magazine, so this is a product/producer analogy. Similarly, a choreographer produces, or designs, a dance. Although ballet and jazz are types of dances, they do not describe the people who produce dance.
6. C. A priest produces sermons, or speeches given in church, so this is a product/producer analogy. Similarly, "pupil" is another word for "student," and pupils produce classwork. Classwork is not produced by secretaries or superintendents.

## Guided Practice – Degree

**3rd Grade**

1. E. "River" means "a large stream," so this is a degree analogy. Similarly, a "leap" is a larger hop. Though "fatal" is a more extreme version of "risky" and "zigzag" is a more extreme version of "sway," in both analogies the order is reversed from the original structure.
2. B. "Starving" means "extremely hungry," so this is a degree analogy. Similarly, "soaked" is another word for extremely moist. Though "bursting" means "extremely full," the order is reversed from the original structure. Farewell is a synonym of goodbye, and they do not differ in degrees.
3. E. "Severe" means "very harsh," and is a more extreme version of "serious," so this is a degree analogy. Similarly, "blinding" means extremely bright. "Excess" is a more extreme version of "extra," the order is reversed from the original structure. "Stroll" is a synonym of "wander," and they do not differ in degrees.
4. D. "Adore" means "to intensely like," so this is a degree analogy. Similarly, "chomp" is a much bigger bite than a nibble. Though a rainstorm involves more rain than a drizzle, and a catastrophe is a more intense accident, the order is reversed from the original structure in both analogies.
5. B. "Filthy" means "extremely dirty," so this is a degree analogy. Similarly, "exhausted" means being "extremely tired." Though "nosy" means "very curious" and "harsh" means "very mean," the order is reversed from the original structure in both analogies.
6. C. "Freezing" means "extremely chilly," so this is a degree analogy. Similarly, "terror" describes an extreme fear. Monsters may invoke fear, and "afraid" is a synonym, but neither word is a more extreme version of "fear."

**4th Grade**

1. E. A city is a much larger community than a village, so this is a degree analogy. Similarly, "obsessed" suggests a much more intense form of interest. Though a law is more extreme than a recommendation, and a town can be made up of many huts, the order is reversed from the original structure in both analogies.
2. B. "Infuriate" is a more extreme version of "annoy," which makes this a degree analogy. Similarly, "gigantic" is a more extreme version of "big." Though "frenzied" means "extremely excited," the order is reversed from the original structure. "Irritate" and "please" are antonyms, with no difference in degree between the two words.
3. A. "Shout" is a louder, or more extreme version of "speak," so this is a degree analogy. Similarly, "excellent" is a more extreme version of "satisfactory." Though "booming" means "extremely loud," the order is reversed from the original structure. In all the other options the relationships are synonyms, with no difference in degree between the two words.
4. D. "Unbearable" means "extremely uncomfortable," making this a degree analogy. Similarly, "gorgeous" means "extremely pretty." In all the other options the relationships are synonyms, with no difference in degree between the two words.
5. C. "Outstanding" is a more complimentary of extreme version of "alright," making this a degree analogy. Similarly, "blissful" is a more extreme version of "content," or happy. Though "feeling" and "contentment," are both associated words, neither are more extreme versions of "content."
6. E. "Adoring" is a more extreme version of "fond," so this is a degree analogy. Similarly, "deadly" is a more extreme version of "unsafe." "Harm" can be a verb or noun, but not an adjective.

## Guided Practice – Homonyms

**3rd Grade**

1. A. "Weak" is pronounced the same way as "week," making this a homonyms analogy. Similarly, "their" is pronounced the same way as "there." Though "tired" is a synonym of "weak," and "calendar" is closely related to "week," the pair of "tired" and "calendar" are not homonyms. "Tower" and "bower" have a rhyming relationship.
2. D. "Paws" is pronounced the same way as "pause," making this a homonyms analogy. Similarly, "our" is pronounced the same way as "hour." Though "puppy" is associated with "paws" and "halt" is a synonym of "pause," they sound very different and are not homonyms. "Sight" and "bite" have a rhyming relationship.
3. B. "Vain" is pronounced the same way as "vein," making this a homonyms analogy. Similarly, "too" is pronounced the same way as "two." Though "handsome," "prideful" and "vaccine" are related to the question words, they are not related together as homonyms, and "bore" and "gore" have a rhyming relationship.
4. D. "Maid" is pronounced the same way as "made," making this a homonyms analogy. Similarly, "four" is pronounced the same way as "for." Though "maiden" and "produced" are related to the question words, they are not related together as homonyms, and "slick" and "stick" have a rhyming relationship.
5. C. "Eight" is pronounced the same way as "ate," making this a homonyms analogy. Similarly, "threw" is pronounced the same way as "through." Though "three" and "waffles" relate to the question words, they are not related as homonyms, and "talk" and "stalk" have a rhyming relationship.
6. A. "Wait" is pronounced the same way as "weight," making this a homonyms analogy. Similarly, "days" is pronounced the same way as "daze." Though "days" and "dyes" share similar sounds, they are not exact homonyms, and "days" and "pays" are rhyming words.

**4th Grade**

1. B. "Pare" is pronounced the same way as "pear," making this a homonyms analogy. Similarly, "sew" is pronounced the same way as "so." Though "cut" is a synonym of "pare" from the question words and "ripe" can describe a "pear," also from the original question words, the specific pair of "cut" and "ripe" are not homonyms. "Ease" and "lease" have a rhyming relationship.
2. E. "Loan" is pronounced the same way as "lone," making this a homonyms analogy. Similarly, "berry" is pronounced the same way as "bury." Though the word pair of "listen" to "glisten" have a similar ending, they are not homonyms. The word pair "library" and "alone" are related to the original question words, but they are not related as homonyms together.
3. C. "Piece" is pronounced the same way as "peace," making this a homonyms analogy. Similarly, "cent" is pronounced the same way as "scent." Though the word pairs of "daunt" to "taunt" have a similar ending, they are not homonyms. The word pair "entire" and "war" are related to the original question word pair, but they are not related as homonyms together.
4. A. "Throne" is pronounced the same way as "thrown," making this a homonyms analogy. Similarly, "flea" is pronounced the same way as "flee." Though the word pair of "crown" and "hurled" and the word pair "king" and "launched" are related to the original question word pair, they are not related as homonyms together.

5. D. "Great" is pronounced the same way as "grate" making this a homonyms analogy. Similarly, "rain" is pronounced the same way as "reign." "Where" and "wear" would be homonyms, but "wearing" is not a homonym of "where," due to the additional suffix.
6. E. "Male" is pronounced the same way as "mail," making this a homonyms analogy. Similarly, "steel" is pronounced the same way as "steal." "Steel" and "deal" are rhymes, not homonyms.

## Guided Practice – Synonyms

**3rd Grade**

1. A. "Doubtful" is another word for "unsure," so this is a synonym analogy. Similarly, "base" is another word for "bottom." Though "fierce" and "mild" may both describe a person, they are antonyms, as are "ill" and "healthy." A computer is a type of technology, but the two words are not synonyms.
2. A. "Evening" is another word for "night," so this is a synonym analogy. Similarly, "soil" is another word for "dirt." In all the other options, the analogy relationships are antonyms.
3. D. "Careless" is another word for "sloppy," so this is a synonym analogy. Similarly, "nation" is another word for "country." "Sick" and "well," or healthy, are antonyms, as are "toasty," or warm, and "frosty," or cold.
4. D. "Fortunate" is another word for "lucky," so this is a synonym analogy. Similarly, "shiver" is another word for "tremble." "Unite" is an antonym of "divide," and "odd" is an antonym to "typical."
5. D. "Belief" is another word for "opinion," so this is a synonym analogy. Similarly, "little" is another word for "miniature." "Flexible" is an antonym of "rigid," or hard, and a "cage" is used to hold a "prisoner," but they are not synonyms.
6. C. "Edit" is another word for "change," so this is a synonym analogy. Similarly, "harm" is another word for "hurt." Though words like "cruel," "affect," and "hit" are all related to the question words, none of them are synonyms of "harm."

**4th Grade**

1. E. "Ancestor" is another word for "elder," so this is a synonym analogy. Similarly, "entirety" is another word for "all." In all the other options, the word relationships are antonyms.
2. C. "Dignity" is another word for "pride," so this is a synonym analogy. Similarly, "grimace" is another word for "frown." In all the other options, the word relationships are antonyms.
3. B. "Clap" is another word for "applause," so this is a synonym analogy. Similarly, "crafty" is another word for "tricky." In all the other options, the word relationships are antonyms.
4. D. "Panicky" is another word for "frantic," so this is a synonym analogy. Similarly, "peaceful" is another word for "calm." In all the other options, the word relationships are antonyms.
5. B. "Concern" is another word for "worry," so this is a synonym analogy. Similarly, "evidence" is another word for "proof." Though "mother" and "parent" can be the same, "mom" would be a better synonym to "mother" because "parent" can also represent "dad." In all the other options, the word relationships are antonyms.
6. A. "Delay" is another word for "postpone," so this is a synonym analogy. Similarly, "contact" is another word for "touch." Though one must reach out in order to make contact, "reach" describes the action before contact, and is not a synonym.

# Mixed Practice

## 3rd Grade

1. C. A "town" is a small community, while a "metropolis," or sprawling city, is the more extreme version. That means this is a degree/intensity analogy. The best match is "deep" and its more extreme version, "bottomless." Although a "cub" is a baby version of a "bear," the order is reversed from the original structure.
2. E. Armor is used to defend oneself, so this is a function/object analogy. Similarly, a party is used to celebrate some joyful occasion. Though a chorus can bring people together, that is not its main function.
3. C. Tornadoes cause destruction, so this is a cause/effect analogy. Similarly, medicine can lead to good health. Though composters create operas as well, the order is reversed from the original structure.
4. C. A rubric is used to determine a grade, so this is a purpose/object analogy. Similarly, a ruler is used to determine length. An item is not used to determine a catalog, and a curtain is not used to determine a rod.
5. B. A researcher uses an encyclopedia to look up information. That means this is an individual/object analogy. Similarly, a cartographer uses a map to document their findings. Adversary and enemy are synonyms, which is the incorrect structure.
6. E. "Illogical" shares the same meaning as "nonsensical," so this is a synonym analogy. Similarly, "divert" and "redirect" mean the same thing. "Conspire" (as in conspiracy) is not to be confused with "perspire," which means to sweat.
7. A. A mixture is concocted, so this is a noun/verb analogy. Similarly, a pupil is educated. While a compartment may be sealed, the order is reversed from the original structure.
8. E. "Vital," which means "essential" or "necessary," is the opposite of "unnecessary," making this an antonym analogy. Similarly, "junior" is the opposite of "senior." The other options are all synonyms.
9. D. A t-shirt may be a part of an outfit, so this is a part/whole analogy. Similarly, a layer may be part of a cake (which can be multi–layered). "Cotton" and "silk" are different types in a category, but silk does not contain cotton, and vice versa.
10. D. "Graduated" is the past tense version of the verb "to graduate," which means this is a grammar analogy. Similarly, "watered" is the past tense version of the verb, "to water." While "celebrated" is the past tense of "celebrate" and "instructed" is the past tense of "instruct," the order is reversed from the original structure.
11. E. Tuna is a type of fish, which makes this is a type/kind analogy. Similarly, a snake is a type of reptile. "Lure," which means to tempt, and "catch" do not have a type to kind relationship.
12. B. A ballerina performs ballet, so this is a definition analogy. Similarly, a singer performs opera. Though a singer may use his/her voice, an orchestra, or a songwriter to support their performance, none of those describe what the singer performs.

## 4th Grade

1. A. "Anguish," or the feeling of being deeply unhappy, is a more extreme version of "discontent." Therefore, this is a degree analogy. Similarly, "rapid" is a more extreme version of "quick." "Glacial," which means extremely slow, is an antonym, which is an incorrect analogy structure.
2. C. "Fabricate" means "to lie," or tell a falsehood, so this is a synonym analogy. Similarly, "disorderly" means messy, or "chaotic." The pre-fix "dis" means "not," and the suffix "-ly" means "characteristic of," making the overall meaning "characteristically not ordered." Disorganized" does not mean the same thing as "section."

3. B. Broccoli is a type of vegetable, which means this is a category analogy. Similarly, to twirl is a type of motion. "Spin" is a synonym to "twirl," and not a category, and "dizzying" is an adjective, not noun.
4. B. "Vacant" means the same thing as "empty," so this is a synonym analogy. Similarly, "quiet" means the same thing as "muted." Though "lot" and "parking" are words that may be associated with "vacant," they are not synonyms.
5. C. "Aisle" is pronounced the same way as "isle" making this a homonyms analogy. Similarly, "hall" is pronounced the same way as "haul." Though "sew" and "slow" rhyme, they do not sound exactly the same.
6. B. A handle is part of a mug, making this a part/whole analogy. Similarly, a thumb is part of a hand. Though a pane is a part of a window, and a dock is a part of a harbor, in both pairs the order is reversed from the original structure.
7. A. "Jagged" means the same thing as "spiky," so this is a synonym analogy. Similarly, "frenzy" means the same thing as "madness." All the other answer options are antonyms.
8. B. An elevator is used to lift people or objects, so this is a uses analogy. Similarly, a tablecloth is used to cover things. Although one uses an "escalator" by riding it, the order is reversed from the original structure.
9. C. "Victory" means having won something, which is the opposite of "loss," making this an antonym analogy. Similarly, "locked" and "open" are also opposites. "Sealed" is a synonym of "locked," and "slit" is a noun rather than adjective.
10. B. A characteristic of chalk is that it is "powdery," making this a characteristic analogy. Similarly, a characteristic of ice is that it is "frigid," or frozen. Though ice may come in the shape of a cube, "cube" is a noun, not an adjective.
11. E. A cushion is a part of a couch, making this a part/whole analogy. Similarly, there are many years in a century. Though a caterpillar turns into a butterfly, neither is a part of the other. A definition is part of a dictionary, but the whole is mentioned before the part, making the order reversed from the original structure.
12. C. Cancer is a type of disease, which means this is a category analogy. Similarly, "kneeling" refers to a type of position that human bodies can take. "Squatting" is another type within the same category, but does not describe the category itself. Similarly, kneeling is not a type of body.

# Reading Comprehension

## Fiction

### 3rd Grade

Passage #1

1. B. *Main Idea.* In line 3, the narrator tells us that she "couldn't swim" without floaties, but by the end, she solves her problem by learning how to swim on her own. The narrator loves swimming, so she is not afraid to go in the pool. Being tricked by her cousin is part of the solution to her problem, rather than the problem itself. The narrator does not lose her floaties, nor does her cousin need to learn how to swim.
2. D. *Vocabulary*. We learn in line 10 that cousin Billy lets air out of the floaties to help the narrator learn to swim, therefore we know that they need to be blown up with air for them to work. "Blow up" is the best replacement for "inflate." Since she is doing this before entering the pool, she must not be taking them off, or deflating them (i.e. removing air).
3. C. *Inference.* Right before the narrator's "cheeks flamed bright red" (lines 8-9), her cousin tells her that she is not really swimming because the floaties are helping her. We can assume that is because she is embarrassed by her cousin's words. Since she then complies with his instructions, there is no evidence that she is angry with him. She does not mention being sunburnt or that she is wearing red floaties.
4. A. *Inference.* In line 11, the floaties run out of air, at which point she began to worry. That suggests that she felt she would sink without their help. Billy does not leave the narrator alone in the pool. The narrator never mentions broken floaties or her mother watching her. The narrator does not know how to swim, but she does not express fear of never learning how.
5. E. *Detail.* The narrator directly states, "Billy had tricked me, but I wasn't mad because I had finally learned how to swim by myself" (line 15-16). The narrator does not trick her cousin, and he is the one who taught her to swim. The passage does not suggest that the narrator and her cousin are best friends, or that she has a good sense of humor.

Passage #2

1. C. *Detail.* The story begins with: "He was on his way to get some special grass seed" (lines 1-2). Even though Danny Meadow Mouse believed that it is good to work hard for something valuable, that is not the reason he left home. Danny did not just want to enjoy the weather, explore the tall grass, or trick Mr. Blacksnake.
2. B. *Inference*. Danny says that it is going to be an exciting day (line 4). Even though he runs into Mr. Blacksnake, he is still cheerful after the encounter (line 20). This shows us that Danny was excited. He was not scared, uninterested, lonely, or tired.
3. C. *Detail.* Danny Meadow Mouse uses all his senses, but the most important one is his sense of hearing because he could not see anything over the tall grass (lines 8-9). The phrase "most of all" (line 8) is an additional clue.
4. D. *Inference*. In lines 18-19, Danny tricks Mr. Blacksnake by taking the smaller path on the left instead of staying on the right one like Mr. Blacksnake expected. Mr. Blacksnake was fooled and gave up chasing Danny. Danny did not run faster than Mr. Blacksnake, use his sense of hearing, hide in the tall grass, or give up and go home.
5. A. *Vocabulary*. In this case, "scampered" means "hurried." We can assume this because Danny was in a rush to escape Mr. Blacksnake. Though "walked" is also a motion, it does not match the urgency in the story. "Rested," "stayed," and "hid" all imply that he stayed in one spot, which is untrue.
6. E. *Main Idea.* The main idea from this lesson is that smarts are more important than speed: "he knew that Mr. Blacksnake could run faster. 'I must use my brain to save me!' thought Danny"

(lines 13-14). The lesson is not to never trust a snake, because Danny never trusted Mr. Blacksnake. Though Danny is working hard for his seed, the story does not tell us whether or not he reaches his goal or if it is delicious. Even though Danny takes the road less taken, it is a detail rather than the moral of the story. Size is not mentioned.

Passage #3

1. C. *Detail.* In line 2, the passage reveals that the woman earns a living by running errands for neighbors. She did not beg for money or trade gold and silver, nor did the Bogey Beast pay her. Even though she felt lucky, she did not earn a living this way.
2. A. *Vocabulary.* In the beginning of the story, we are told that the old woman lived in "a tiny cottage" (line 2); we can infer that her wish is to buy a larger house. Hence, in this case "grand" means "fancy," or "luxurious." The woman also says that she will live like a queen. "Small," "comfortable" and "empty" do not describe ways that improve upon her little cottage.
3. B. *Inference*. The woman says that she was tired of carrying such a heavy weight (line 8). Then she says that silver is less trouble than gold (line 10). This shows that she thinks that silver is lighter and easier to carry. Though she says "silver is less trouble than gold" (line 10), given the other context clues "trouble" is more likely to mean the physical difficulty of carrying rather than fear of people being envious of it. She does not say that the silver was prettier.
4. E. *Detail.* When the woman looks at her silver, she finds that it is actually a stone (line 12). She was thinking about the silver before she looked at it. She was not actually dreaming nor did she wish the silver was gold. It did not become bigger either.
5. D. *Detail.* Despite being described as "big as a haystack" (line 15), this line is figurative language, and Bogey Beast did not actually take on the form of a haystack. He did appear as gold (line 5), silver (line 9), stone (line 12), and a form with lanky legs, long ears, and a long tail (lines 15-16).
6. A. *Main Idea.* This story teaches us that there is a bright side to everything. The woman is always cheerful even when her gold turns to silver, her silver turns to stone, and even when the stone turns into the Bogey Beast, things that most people would consider negatively. The main lesson is not that it is better to live within your means, since there is no mention of the old woman overspending, or to beware of the Bogey Beast, who does not actually harm the old woman despite playing a trick on her.

Passage #4

1. D. *Main Idea.* The old woman sweeps the kittens into the cold after they "began to fight" (line 2). This teaches the kittens the lesson that "it [is] better…[t]o lie down and sleep than to quarrel and fight" (lines 11-12). Since the old woman "seized" her broom, it was a purposeful action.
2. B. *Detail.* Since "[t]he ground was covered with frost and snow…[so they] had nowhere to go" (lines 5-6), the kittens are no longer feeling playful or angry. They stop fighting and rest on "the mat at the door" (line 7) because they are regretful, or remorseful. The kittens show no sign of positive emotions such as being proud or joyful.
3. E. *Detail.* After the two kittens "laid down on the mat at the door…they crept in, as quiet as mice" (lines 7-9). The phrase "quiet as mice" is referring to the way they are creeping, or moving. It is not a reference to the woman's sweeping or the snow falling. Likewise, there are no actual mice in the story.
4. A. *Vocabulary*. The author uses "quarrel" in the same sentence as "fight" (line 12), which hints at the fact that quarrel might mean argue. "Punch" is unlikely to be the meaning, because kittens cannot form fists.
5. C. *Inference.* The kittens learned their lesson because it was as "cold as ice" (line 10) outside. They decided to stop fighting because they did not want to be put outside again – "they found it was better, that stormy night/[t]o lie down and sleep (lines 11-12). They had already stopped fighting while waiting outside, so they could not have been exhausted. There is no sign in the poem that either one won the fight or gave up.

Passage #5

1. A. *Main Idea.* In the poem, the boy describes the moon as it looks from his window. In line 4, he asks, "Will you come down soon?" In lines 15-16 he says, "Just a little nearer, moon / To please a little boy." He wants the moon to come closer to him.
2. B. *Inference*. The word "horned" describes the little moon. Here it means "having horns," the kind of horns found on a bull or a cow. If you picture how a goat's horns stick out from its head, you can infer that the moon looks something like that. "Half moon," or a moon with points that stick up, is the answer that fits best, as opposed to a full moon, which is rounded. The references to "happy" and "horned" are figurative descriptions, and do not mean that the moon is literally in a good mood or related to goats.
3. C. *Inference.* The boy is looking up at the sky, but he is not literally in the sky, or on the moon. In Line 5, the boy says that the moon is on his "nursery window-sill." A nursery is where young children play and sleep, so it's likely that the boy is in his bedroom. "Window" is another clue that he's looking out from somewhere that is inside.
4. E. *Vocabulary.* Lines 11-12 describe what the moon is doing. It can see Jupiter and Mars through shiny clouds. For that reason, the word that best fits in place of "peeping" is "looking." None of the other choices fit what the moon is doing in those lines.
5. D. *Inference*. In this poem, the author uses many words that tell how the moon moves. The moon is "slipping" through the sky (line 1). It flies and floats (lines 6-7), and brushes the tops of trees (line 9). "Rocking" is another way of describing how the moon moves. These adjectives do not describe sounds or appearances.

## 4th Grade

Passage #1

1. D. *Inference.* Lines 4-6 say, "While I was young, I lived upon my mother's milk, as I could not eat grass. In the daytime I ran by her side, and at night I lay down close by her…There were six young colts in the meadow besides me." Clearly the narrator is not a human child, grandmother, rider or master. *Colt* also means young horse.
2. C. *Story Elements.* In lines 1-3, the narrator speaks of "a large, pleasant meadow," and later goes on to describe activities like galloping around (lines 7-8). Though a pond and a farmhouse are nearby, such activities could not have taken place there.
3. A. *Inference*. In Lines 14-15, the narrator describes what his mother told him about the way he should grow up. She says, "I hope you will grow up gentle and good" and "never bite or kick, even in play." She is telling him the right way to behave. Though the narrator's mother speaks about her family, it's to demonstrate that they all had good behavior, not to advise her child on respecting the family.
4. D. *Detail.* The narrator says that sometimes his play with friends got rough. In line 9, the narrator says his mother called to him "when there was a good deal of kicking." Eating and sleeping with her were mentioned in a different part of the story (lines 4-5).
5. B. *Inference.* In lines 12-13, the narrator's mother describes the accomplishments of the narrator's father and grandfather, from winning races to having a "great name." There is no support for the idea that the family dislikes working for the master, that they are lonely, or that they do not have to work.
6. B. *Inference.* The narrator's mother shares good advice on the best way to live. The word that best describes someone who does that is "wise." Although she is proud of her family accomplishments, she does not talk about them in a boastful way.

Passage #2

1. E. *Main Idea.* In the passage, Sarah and her father are in a cab (line 1), and lines 6-10 describe a voyage from India to "the place." Lines 11-17 refer to "the place" without saying what it is.

Therefore, Sara is on her way to a mysterious place. They are traveling from, rather than to, India (line 6).

2. A. *Detail.* The author states: "At this moment she was remembering the voyage she had just made from India with her father" (lines 6-7). Though she might also be thinking about India itself, there is no mention of bad weather, and more of the details are about the voyage itself (lines 6-7). The darkness outside (lines 9-10) is a detail of the trip, which is the overall topic of her thoughts.
3. C. *Inference.* The author describes Sara as looking older than her age, and thinking about adult topics: "She was such a little girl that one did not expect to see such a look on her small face…she could not remember any time when she had not been thinking things about grown-up people" (line 3-5). The best word to describe this is *mature.* Though she does not know exactly where she is going, she does not seem confused. Her behaviors around her father show a warm and loving personality rather than a cold one.
4. D. *Inference.* Lines 11-17 discuss "the place." Sara knows that other children have been sent there. Line 19 refers to lessons. It's most likely that the place is a school.
5. A. *Story Elements.* In line 17, we read that Sara "was troubled by the thought that [her father] could not stay with her." Although we know that Sara sometimes thinks about the grown-up world (line 5), that's not her main problem in the story. She does not mention friends from India.
6. B. *Vocabulary.* Sara knows that other children have been "sent away" from India because the weather is bad for children, and she has long understood that she would have to go, too (lines 16-17). In this context, the choice that fits best is "leave." Like Sara does, other children may worry about leaving, but "worry" is not the best fit in the sentence.

Passage #3

1. B. *Story elements.* The children enjoyed playing in the garden, and after the giant returned, "the poor children had now nowhere to play" (line 18). The rocks in the road are a minor detail to the overall problem the children face. The ogre and children never interact in the story. When the giant did not tend to his garden, the children actually had a place to play.
2. D. *Inference*. The children were able to play in the garden until the "day the Giant came back" (line 8). They always played after school (lines 1-2), not when they got out early. They played often, not only when the peach tree bore fruit (lines 5). Since the Giant wasn't there, the children could not trick him. Once they met the Giant, they did not get along with him (lines 12-14).
3. B. *Inference.* The flowers were in a "large lovely garden" (line 3), so the metaphor is most likely describing their appearance. The age of the flowers in not mentioned in the story. When the children play during the day, the flowers are visible. "From outer space" is an incorrect, literal reading of the metaphor. The flowers were not shaped like constellations, because they were "here and there" (line 3) in no particular pattern.
4. C. *Vocabulary*. The Giant is being harsh, or scary, towards the children, "and the children ran away" (lines 12) as a result. The Giant was telling the children to leave, so he was not being polite or funny. While the Giant was upset with the children, he was not portrayed as sad. There is no mention of how loud he is.
5. A. *Detail.* The Giant leaves the ogre because "he had said all that he had to say" (line 9). Although his garden had fruit, the Giant is not leaving for this reason. The Giant and the ogre do not argue in the story, nor does the ogre return to the garden with the Giant. The Giant does not know the children are there until he returns home (lines 10-12).
6. C. *Inference.* The Giant is mostly selfish. He says "My garden is my own garden" (line 13), and he does not want to share. He kicks the children out of the garden, so he is not friendly or kind. He has been visiting a friend, which shows he is not lonely. Since he leaves his friend's house

because they do not have anything to talk about and his "conversation was limited," (line 10) the Giant is not very talkative.

Passage #4

1. C. *Main Idea.* The speaker mainly eats plants throughout the poem. He says "I nibble it leaf by leaf" (line 4) and "I eat and swallow and eat again" (line 8). The caterpillar eats the flowers and leaves, but does not admire or hide under them. He says "I'll mind my business" (line 12), so he is not nosy. He also ignores the rain.
2. E. *Inference*. The speaker identifies himself as a caterpillar, and says "I'm a good worm" (line 12). Old-man's looking glasses and dandelions are names of plants he eats. The rooks, or birds, flap and croak, not the speaker.
3. A. *Vocabulary.* The caterpillar creeping, or *crawling*, under the honeysuckle. He is not sleeping or resting during the poem, since he says "I eat and swallow and eat again" (line 8). The poem does not show him jumping among the plants.
4. D. *Inference*. The speaker searches for food throughout the poem, and says "I munch and nibble unregarding" (line 10) the rain, showing he is determined. This also shows he is not lazy, or angry about the rain. While he works throughout the passage, he is not weary, since he keeps eating at the end. Since there are no other characters, he is not shown to be loving.
5. B. *Detail.* When it begins to rain, the speaker says that he continues to eat "unregarding" (line 10), i.e. ignoring the rain. This shows he did not stop eating or go to sleep. The "hawthorn leaves are juicy" (line 11), so he is still outside when it rains. The poem does not show him drinking the rainwater.

Passage #5

1. A. *Main Idea.* The poem describes how the snow keeps falling "[i]n shade or shine" (line 18), even though the narrator was asking, "Tomorrow will the storm be done?" (line 15). The entire poem shows the progression from fluttering flakes to a heavy storm, or blizzard, and how unpredictable it can be. It is a metaphor for how life is constantly changing. There is no implication that bad things are always followed by good things, however.
2. D. *Detail.* The poem also says that the snowflakes are "[f]luttering in the sky without a trace" (line 5), which shows that the snow is moving randomly, without aim, like a flock of scattering birds. The snow does not literally have wings; rather, the birds serve as a metaphor for the snow's movement.
3. C. *Detail.* While the snowflakes are "fluttering" (line 5) in the first stanza, which shows the soft movement of the wind, the wind becomes much stronger in the second stanza: "It spreads, it twirls, it mounts and whirls" (line 11). There is change throughout all three stanzas, but the storm never stops.
4. B. *Vocabulary*. In the following lines, it says that "At length a mighty wing unfurls/And then, away!" (lines 12-13), which hints that the snow is acting like a bird taking off, or rising. Thus, the word "mount" (line 11) most likely means "rise." While "whistling" (line 8) is referenced earlier in the poem, there are no context clues linking this word to mount.
5. E. *Detail.* The poem does not describe the snow as "sparkling" at any point. All other terms are used to describe the snow's traits: fast (line 2), fluttering (line 5), feathered (line 2), whistling (line 8).

Passage #6

1. D. *Main Idea.* The poet imagines all the ways the shadow behaves. He gives it human ways of behaving, such as jumping (line 4), growing (line 5), being cowardly (line 11), which a shadow doesn't have on its own. This shows the poet is *imaginative*. Though the poet seems to enjoy his shadow's company, he can be teasing, and is not necessarily "kind."
2. A. *Vocabulary*. The poet states: "he hasn't got a notion of how children ought to play, / And can only make a fool of me in every sort of way" (lines 9-10). As a result of not having a "notion," or

understanding of how to play, the shadow "make[s] a fool" of the boy. Though the two lines refer to playing, "game" would not make sense in this context.

3. B. *Inference.* In line 7, the poet says he wants us to imagine how a bouncy ball can bounce high in the air, just like his shadow "shoots up." In line 8, he says his shadow becomes small and disappears. Lines 7-8 are meant to show how the shadow changes size. Though "bounce" is a motion, the metaphor is being used to show the different sizes, rather than literally how the shadow moves.
4. C. *Detail.* In line 11, the poet says, "He stays so close beside me, he's a coward, you can see." It is the poet who is ashamed for the shadow (line 12), not the shadow itself.
5. E. *Inference*. The poet is amused, or entertained, by his shadow, explaining "The funniest thing about him…" (line 5) and calling him "a silly sleepy-head" (line 15). Though he uses some negative words to describe the shadow, his tone is more of affectionate teasing rather than confusion or fear.
6. D. *Inference.* In line 13, the poet says he went outside "before the sun was up." You can infer that when the poet talks about his shadow staying at home, he means that he can't see his shadow because there's no sun.

# Non–Fiction

## 3rd Grade

Passage #1

1. A. *Main Idea.* This is a nonfiction, or informational, passage. It is giving facts Aesop's fables, from what they are (line 3-4), to who told them and when they were first told (lines 3-4), and how they are used today (lines 16-18). The author retells two famous fables as examples – though the examples include stories with animals, the passage as a whole is not a fiction text. Although the passage mentions that there were stories before TV (line 1), the author does not try to persuade that stories are better than TV shows. And while lesson that slow and steady wins the race is mentioned (lines 8-9), it is not the primary point of the passage.
2. B. *Detail.* After the cat scares the country mouse, the country mouse decides to go back home (lines 12-13). Rather than disliking it, the country mouse is actually amazed at all of the city mouse's food (line 12). Though the other options are true, they are not the reason why the country mouse returned to his home.
3. D. *Inference.* Although Aesop's fables were written a long time ago in ancient Greece, the author shows how the fables are still relevant today (lines 13-18). The author mentions that adults and children both enjoy the fables (line 18), so they are not only interesting to children. There is no evidence that Aesop created fables only for Greek people to hear/read, even if they were the first audience, or that the fables are made into books and movies. Even though this passage gives examples of a tortoise, hare, and mice in the fables, we cannot assume these are the only animals in the fables.
4. C. *Vocabulary*. The author says that some passages are funny but others are solemn (line 15). The coordinate conjunction "but" means that solemn is the opposite of funny. The best answer option is "serious." Even though Aesop's fables may be "hilarious," "good," "strange," or "exciting," these words do not fit the context of the sentence.
5. D. *Inference.* From this passage, we can assume that Aesop was imaginative: he was able to come up with many different stories, and found ways to incorporate animals to teach people life lessons. There is no evidence in the passage to suggest that he was determined, sly, quiet, or carefree, even if some of his characters can be described with such traits.

Passage #2

1. A. *Main Idea.* A main idea statement touches on all of the ideas in a passage. This passage is mainly about all the ways in which a blizzard is a special kind of winter storm. The author makes clear that not all winter storms are blizzards.
2. B. *Detail.* In line 6, the author says, "Imagine trying to see through a white bedsheet that is right in front of your face. That is what a whiteout can be like." There is no reference to white paint in the passage. Though strong winds (lines 4-5) and falling snow (lines 11-12) are mentioned, they are not used to describe a whiteout.
3. C. *Detail.* In lines 5-6, the author gives the definition of a whiteout: "Blowing snow often makes it very hard to see. This is called a 'whiteout.'" The bedsheet was a metaphor to describe the experience of a whiteout, rather than explaining what it is. The sky becoming gray (line 1) only means a storm is beginning, not necessarily a blizzard or whiteout. Strong winds and whiteout must occur for three hours or more for a winter storm to be called a blizzard, but the passage doesn't say that whiteouts are when snow falls for three hours or more.
4. C. *Inference.* A blizzard has wind that blows the snow back up so that it is hard to see, even after it stops snowing (lines 12-14). The closest answer option would be "blowing it into the air," which implies reduced visibility. The wind cannot "hit" the snow, smoothing it out/setting it straight would not affect visibility, and changing its direction does not make sense in reference to snow already on the ground.
5. E. *Vocabulary.* The author states: "the best thing is to stay inside and keep warm until the foul weather ends" (lines 17). The *foul* weather is in reference to a blizzard, which is described as snowy and cold (lines 1 and 16) and dangerous to people and animals (line 16). We can infer that any word used to describe such weather would be negative, or unpleasant. There is no mention of the weather being dirty, strange or broken.
6. D. *Inference* In line 17, the author states "the best thing is to stay inside and keep warm until the foul weather ends," implying that the best place to be during a blizzard is indoors, not playing outside. Cold is one of the dangers of a blizzard, but the author doesn't say which danger is worst. To be a blizzard, a storm has to have winds of 35 miles an hour or more, so they cannot occur on non-windy days. Since blizzards are dangerous for animals (line 16), the author is unlikely to recommend dogs be kept outside during blizzards. agree!

Passage #3

1. A. *Main Idea.* The passage tells the history of bento boxes in chronological order. Although the materials bento boxes are made of are described in some parts of the passage (lines 8-9, 16), their appearance is not detailed. It also does not provide instructions on making bento boxes. While the passage tells the history of bento boxes, it does not identify who actually invented them.
2. E. *Inference.* The passage implies that bento boxes were originally created so that people could pack a lunch when they were gone for the entire day: "People left home to hunt, fish, or farm. They often packed bento boxes with rice to eat for lunch" (lines 5-6). While the passage indicates that people could be gone all day fishing, it does not suggest that bait was packed in bento boxes. It also does not provide any evidence that bento boxes were used for people to eat with their friends. Rice was packed in bento boxes, but there is no indication that rice farming caused the creation of bento boxes. Finally, "bento" referred to sacks at one time.
3. C. *Vocabulary.* In the context of the passage, "around for ages" means the bento box has been in use for a long time, supported by "over a thousand years ago" in the next sentence. Even though the passage states the bento box has changed over time, it has not necessarily become larger. The passage also talks about the bento box's use in modern times (lines 16-18), not just in the past. "Ages" refers to a period of time, not a person's age.
4. B. *Detail.* The passage states: "Hoshi-ii is a meal made of dried rice in a bag" (line 8), and "bag" is synonymous with "sack." Unlike bento boxes, the bento for hoshi-ii did not have compartments.

Both the hoshi-ii bento and bento boxes were used to store food for lunch, and both are mentioned to be filled with rice products (lines 5-6 and 8).

5. C. *Detail.* The passage states that "train station bento" were sold to people who "gathered to ride the trains" (line 13). Bentos were made for people who "left home to hunt, fish or farm" (line 5) long before they were sold at train stations. There is no comparison between train and restaurant bento boxes in the passage.

Passage #4

1. D. *Main Idea.* The author begins the passage by declaring that "national parks are an important part of America" (line 1). The author also worries that, if parks were open to mining, "we would lose an important part of our history" (line 16). While the author may agree that Theodore Roosevelt did a lot for national parks, there is no evidence that says the author believes Roosevelt is the greatest president. All the other answer options are opposite of the passage's arguments.
2. A. *Detail.* The author informs us that "Roosevelt passed the Antiquities Act…in 1906…to save the environment…[and] protect plants and animals" (lines 2-3). The caucus discussed in this passage is actually "anti-park" (line 13): the group wanted to take away lands protected by the Antiquities Act.
3. D. *Detail.* There is no reference to private companies making money off national parks; rather, it is the government that currently does so (lines 10-11). National parks do, however, create jobs for local people. In fact, they create "nearly 300,000 jobs" (line 11). Similarly, parks do preserve historical events (line 6), people enjoy sightseeing in them (line 8) and plants and animals do live in them (line 3).
4. A. *Vocabulary*. The author hints at the meaning of this word in a previous sentence in the fifth paragraph: "Some *groups* want to close down parts of these parks" (line 12). We can assume that "group" is a synonym for "caucus."
5. E. *Inference*. According to the passage an anti-park caucus "want to use the lands for oil and mining" (lines 12-13). While there are actually some people who want to shut down the tourism of the parks to protect wildlife, this side of the debate is not discussed in the passage. Additionally, undoing Roosevelt's work would not be honoring his presidency.

## 4th Grade

Passage #1

1. D. *Main Idea.* The passage talks about how people once viewed New Year's (lines 7-12), and then how New Year's resolutions became an important tradition to celebrate it (lines 16-17). The passage does not try to convince people to make resolutions. It also gives evidence of people celebrating New Years in *different* ways all over the world, from eating grapes to watching a ball drop.
2. C. *Inference*. After listing the actions, the author states "Though people celebrate New Year's in different ways" (line 16). This context clue shows that the previous sentences are examples of different ways to celebrate New Year's. The passage does not discuss gift exchanges or things to help make resolutions. There is also no mention of what children do on New Year's.
3. A. *Vocabulary.* "Habit" is the closest answer because it conveys the sense that traditions are something done repeatedly, year after year. Though New Year's is "celebrated," the author does not state that resolutions are made at parties. And while resolutions are old, old is an adjective, not a noun.
4. D. *Detail.* In lines 5-6, the author talks about how in winter, few plants grew and animals were in hiding. Since spring brought change, one can infer that plants started growing, and they could plant new crops. Since spring is when the plants first begin growing, they would not have time to become mature crops yet; therefore, harvest is unlikely to occur in spring. Though some early

peoples celebrated New Year's by choosing a new king or singing songs (line 10), those were the result of feeling hopeful rather than the cause.

5. C. *Inference*. Prior to the given lines, the author writes about how plants don't grow in the cold of winter and animals go into hiding, and spring is when this changes. As the opposite, one can infer that plants do begin to grow in spring and animals come out of hiding. The statement is a metaphor rather than literal: there is no mention of plants and animals dying. The passage also does not discuss whether there was sufficient sunlight in the winter.

Passage #2

1. E. *Main Idea.* The passage talks about the fact that even though something tastes like a vegetable, it is actually a fruit (lines 4-5). Fruits are actually anything with seeds (line 8). People often confuse fruits and vegetables. The passage talks about parents telling their children to eat their vegetables (line 1), tomatoes and peppers are fruits (lines 4-5), and fruits help plants reproduce (line 8), but none of these are the Main Idea.
2. C. *Detail.* The passage says that "a fruit is the part with seeds" (line 8). They help the plant reproduce (line 8). Celery, carrots, and lettuce are vegetables (line 2). Fruit might be part of a healthy diet, tastier than vegetables, and very colorful, but there is no mention of these options in the text.
3. B. *Inference.* The author asks, "What are tomatoes, peppers, peas, and beans?" (line 4-5). Then the author emphasizes that "They are fruits!" This shows what we think is a vegetable is a fruit. This includes tomatoes. The passage does not suggest that kids don't like eating tomatoes, not many vegetables are red, tomatoes are easy to grow, and tomatoes grow with peppers, peas and beans.
4. A. *Inference*. After the passage says that you can't judge a book by its cover, it says that "You also can't judge a vegetable by its taste" (line 11-12). You should not base the content of a book on its cover or assume that something is a vegetable based on its taste. The passage does not suggest that books are like fruits and vegetables or you never know what you're going to eat for dinner. The passage does say that a tomato is a fruit (line 4-5), so it's not safe to say to say it is a vegetable. The passage also mentions that parents have trouble making their kids eat vegetables (lines 1-2). However, these are not the meaning of you can't judge a book by its cover.
5. B. *Vocabulary*. The passage says that vegetables are parts of the plant without seeds (lines 9-10). These parts might be the leaves, stalk, or root (line 10). A stalk is the stem, or main supporting part of the plant. A stalk is not the top of a vegetable. "Color" and "thin" are descriptors, and not parts of the vegetable. In this context, "stalk" does not mean "follow."

Passage #3

1. A. *Inference.* According to the author, "Working for free can have its rewards for you, too. It can also reward the volunteer with new skills" (lines 7-8). The author supports the pro bono nature of volunteering (line 5). The author believes that volunteering helps communities *and* the individual. There is no mention of volunteering being difficult or being the same as donating money.
2. D. *Vocabulary*. "Pro bono" is defined in lines 5-6: "That means they offer services without any costs." This means that volunteers are not paid. While discounted means being paid less, it is not the same as being free. Costly means the opposite, or expensive.
3. E. *Detail.* Gaining new skills is listed as a reward for the volunteer, not the community (lines 7-8). The author lists all the other options as benefits of volunteering for the community: "cleaner spaces and new development" (lines 6-7), feeding those in need (line 13) and making "people feel cared for" (line 7).
4. B. *Inference*. The author describes the volunteers as having "compassion" (line 15). Compassion is a synonym for kindhearted. A volunteer may help the homeless, but not *every* volunteer has

ties to homelessness There is no evidence that volunteers are likely to be selfish, competitive, or bored.

5. A. *Inference*. According to the author, "You can…make a lemonade stand or start a bake sale…[then] donate the money to charity" (lines 11-12). Profits is another word for money that you make. Since the profits are donated to a charity, it fulfills the purpose of volunteering to "help [the] community." Since you do not keep the profits, it is not a "personal profit," and the point of volunteering is to do things not for the rewards but out of a desire to be helpful.

# 3rd Grade Final Practice Test (Form C)

## Section 1 – Quantitative

1. A. *Statistics – Mean*. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. Lorenzo spent a total of $124 on 4 gifts. Divide to find the average: $124 ÷ 4 = $31.
2. B. *Numbers – Arithmetic Word Problems*. 35 total stamps minus Stacy's 23 stamps equals 12 stamps. (In number sentence form: 35 – 23 = 12)
3. A. *Statistics & Probability – Probability.* There are 4 squares, which is more than any of the other shapes shown. Therefore, it has the greatest chance of being selected.
4. C. *Numbers – Place Value.* Subtract to find the distance between 17 and each answer choice: 17.00 – 16.89 = 0.11; 17.00 – 16.95 = 0.05; 17.04 – 17.00 = 0.04; 17.09 – 17.00 = 0.09; and 17.1 – 17.0 = 0.1 = 0.10. Since 17.04 is only 4 hundredths away from 17, it is the closest.
5. C. *Geometry – Shapes and Attributes*. A parallelogram, by definition, MUST have two pairs of parallel sides. A parallelogram COULD have four equal sides or four right angles (or both), but it doesn't have to. A parallelogram also cannot have more than 4 sides, as it is a quadrilateral.
6. E. *Geometry – Shapes and Attributes*. A rhombus is a parallelogram with four equal sides. A rectangle that does not have four equal sides is not a rhombus. Choice C is incorrect because it is a pentagon, not a quadrilateral.
7. D. *Numbers – Basic Concepts.* In expanded form, 126 = 100 + 20 + 6 and 245 = 200 + 40 + 5. First, add the ones: 6 + 5 = 11. Next, add the tens: 20 + 40 = 60. Last, add the hundreds: 100 + 200 = 300. Find the sum of the place values: 300 + 60 + 11 = 371.
8. C. *Measurement – Time and Money*. Subtract to find the amount of change Aja received: $4.00 – $3.20 = $0.80, and $0.80 = 80 cents. A quarter is worth 25 cents so 3 quarters are worth 3 × 25 = 75 cents. If Aja received 3 quarters, then she would need another 5 cents which is the value of 1 nickel or 5 pennies. However, these combinations are not answer choices. If Aja received 2 quarters (50 cents), she would still need another 30 cents. Since a dime is worth 10 cents, 3 dimes are worth 3 × 10 = 30 cents. The correct answer is 2 quarters and 3 dimes since 50 cents + 30 cents = 80 cents, and 80 cents = $0.80.
9. C. *Statistics & Probability – Probability.* There is only 1 green balloon, which is fewer than the other colors. Therefore, it is least likely to fly away.
10. D. *Numbers – Basic Concepts*. One method is to use the expanded form of each number. In expanded form, 86 × 15 = (80 + 6) × (10 + 5). We need to find four products and add them:(80 × 10) + (80 × 5) + (6 × 10) + (6 × 5) = 800 + 400 + 60 + 30 = 1,290.
11. D. *Numbers – Ordering Numbers and Fractions*. Since the numerators are equal, focus on the denominators. The fraction with the smallest denominator has the greatest value, while the fraction with the largest denominator has the least value. Since 10 < 20 < 40 < 50 < 100, then $\frac{1}{10} > \frac{1}{20} > \frac{1}{40} > \frac{1}{50} > \frac{1}{100}$.
12. B. *Algebra – Ratios and Proportions*. If there is 1 black piece for every 1 white piece, then there should be an equal number of both. Therefore, if there are 16 black pieces, then there will be 16 white pieces.

13. B. *Numbers – Arithmetic Word Problems*. We can add 26 to half of 84: 26 + (84 ÷ 2) = 26 + 42 = 68.
14. B. *Geometry – Area and Perimeter*. Area is calculated by multiplying length by width: Area = length × width. Replacing the area with 30, the length with 6, and the width with w gives us: 30 = 6 × *w*. Therefore, *w* must equal 5 units since 30 = 6 × 5.
15. C. *Statistics – Interpreting Tables and Bar Graphs.* The top of the "Baseball" column lies between 10 and 15 people. 12 is the only answer choice between, but not including, 10 or 15.
16. E. *Statistics – Interpreting Tables and Bar Graphs.* The top of the "Football" column lines up with 20 and the top of the "Basketball" column lines up with 15. Subtract to determine how many more people play football than basketball: 20 – 15 = 5.
17. A. *Numbers – Arithmetic Word Problems*. 37 DVDs to start minus the 28 DVDs Linus has left equals 9 DVDs he gave to his sister. (In number sentence form: 37 – 28 = 9.)
18. C. *Geometry – Area and Perimeter*. Perimeter is calculated by adding all the side lengths of a closed shape: perimeter = 7 + 7 + 7 + 7 + 7 + 7 = 42 or Perimeter = 7 × 6 = 42.
19. D. *Numbers – Fractions.* Add the amounts to find total time. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 12: $\frac{3}{4}+\frac{1}{8}=\frac{3\times 2}{4\times 2}+\frac{1}{8}=\frac{6}{8}+\frac{1}{8}=\frac{7}{8}$.
20. D. *Numbers – Arithmetic Word Problems*. 10 sheets per pad times 20 pads equals 200 sheets per box (in number sentence form: 10 × 20 = 200). 200 sheets per box times 5 boxes equals 1,000 total sheets (in number sentence form: 200 × 5 = 1,000).
21. C. *Numbers – Basic Concepts*. On the left side of the equation, 23 + 9 = 32. In order for the equation to be balanced, we need the right side to also be equal to 32. We must therefore add 22 to 10.
22. B. *Numbers – Ordering Numbers and Fractions*. Of the given answer choices: $\frac{1}{4}$ is less than $\frac{1}{2}$ so it is incorrect; $\frac{3}{2}=1\frac{1}{2}$ which is greater than 1 so it is incorrect; $\frac{4}{2}=2$ which is greater than 1 so it is incorrect; and $\frac{5}{4}=1\frac{1}{4}$ which is greater than 1 so it is also incorrect. $\frac{3}{4}$ is the only choice that is greater than $\frac{1}{2}$ and less than 1.
23. C. *Measurement – Unit Analysis*. There are 1,000 grams in 1 kilogram. Therefore, 4 kilograms = 4 × 1,000 = 4,000 grams. Divide by the number of pencils, 100, to get the mass per pencil: 4,000 ÷ 100 = 40 grams.
24. D. *Numbers – Basic Concepts*. A prime number has exactly two distinct factors, 1 and itself. This is only true of 17. The other answer choices have additional factors.
25. C. *Numbers – Fractions*. First, divide the numerator by the denominator: 9 ÷ 4 = 2 R 1. Then place the remainder above the denominator and add to the whole number: $2+\frac{1}{4}=2\frac{1}{4}$.
26. D. *Measurement – Time and Money*. Adding the minutes gives us: 40 + 45 = 85 minutes. Since there are 60 minutes in an hour, we know lunch will go past 12:00 p.m. Subtract to find the number of minutes past 12:00 p.m.: 85 – 60 = 25. Therefore, lunch will end 25 minutes past 12:00 p.m. which is 12:25 p.m.
27. D. *Numbers – Arithmetic Word Problems*. First, find the number of seats in the first 6 rows: 4 seats per row times 6 rows equals 24 seats (in number sentence form: 4 × 6 = 24). Next, find the number of seats in the last 10 rows: 6 seats per row times 10 rows equals 60 total seats (in number sentence form: 6 × 10 = 60). Last, add to find total number of seats: 24 + 60 = 84.
28. A. *Numbers – Fractions*. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 10: $\frac{9}{10}-\frac{3\times 2}{5\times 2}$. This simplifies to $\frac{9}{10}-\frac{6}{10}=\frac{3}{10}$.

29. C. *Measurement – Time and Money*. There are 7 days in 1 week so there are 3 × 7 = 21 days in 3 weeks. Therefore, "3 weeks and 1 day" is equal to 21 + 1 = 22 days. Ellen's birthday is 22 days before July 29 which is July 7 since 29 – 22 = 7.
30. B. *Numbers – Fractions*. Subtract the amounts to find how much longer it took Mike to finish. When denominators are equal, subtract the numerators: $\frac{4}{5} - \frac{3}{5}$, or $\frac{4-3}{5} = \frac{1}{5}$.

# Section 2 – Verbal

1. B. "Possibility" means a "chance" of something happening. The suffix "-ility" is used to form abstract nouns from adjectives, and modifies the base word "possible" into a noun. Though words like "hopeful" and "likely" are associated words, they are adjectives, not nouns.
2. A. "Vision" means the ability to see, or "sight." "Glasses" and "eyes" allow for vision, but they are associated words rather than synonyms. Someone that cannot see is "blind," which is the opposite of having "vision."
3. D. A "clever" person is one who learns quickly, or is "smart." A competitive person works toward something, but may or may not be clever. "Slow" is an antonym.
4. C. A "skill" is an "ability" to do something. An expert or leader may have a skill, but "expert" and "leader" are nouns referring to people rather than adjectives. The suffix "-un" means not, so "unable" means "not able," and is an antonym.
5. E. "Exchange" means to "trade" one thing for another. Although an exchange may take the form of payment for goods, it does not have to, and "pay" does not describe both directions of the transaction. "Mimic" means "to copy," so it is not a synonym.
6. B. "Irritate" means to annoy, bother, or "disturb." While one's brother may irritate one's nerves, "brother" and "nerves" are both nouns and not verbs. "Support" means "to care for or help," so it is an antonym.
7. B. "Misery" is a state of suffering, or "unhappiness." The root "miser" means "worthless," and the suffix "-y" means "characterized by," which makes the definition "characterized by feeling worthless." Someone who feels "numb" does not feel anything good or bad, and "joy" is an antonym.
8. C. "Automatically" means something happening without prior thought, or "naturally." "Auto-" means "self," "-matic" means "moving," and the suffix "-ic" means "characteristic of," and the suffix "-ly" means "every," which makes the meaning "characteristically self-moving." Even though "automobile" has the same combining form "auto-," it does not mean the same thing, since an automobile is a car. A reflex is automatic, but "reflex" is a noun and not an adverb. To manually do something means taking thought and time to do it individually, so it is an antonym.
9. D. To "assist" means to give aid, or "help." An "assistant" is "someone that can assist," so it is a noun rather than a verb. To "favor" means "approve" or "support," so it is not a synonym.
10. E. Your "opponent" is someone that takes the opposite stand against you, or your "enemy." When two people challenge each other, they compete against each other, but "compete" is a verb and not a noun. An ally, or partner, is an antonym of "opponent."
11. E. To "escape" means to get away, or "flee." "Prison" and "cage" are both words that represent places where people may be trapped or wish to escape from. They are also both nouns and not verbs. If someone releases another, it means to "free" them, which is an antonym of "escape."
12. A. "Limit," means a point past which one cannot go, or a "border." Someone may "push" their limit, but that is a verb and not a noun. "Infinite" means "a place without a border," so it is an antonym.
13. C. "Spoil" means mess up, or "ruin." Though commonly associated with the word "spoil," "fruit" and "children" are nouns, not verbs. To "love" means "to care for."
14. B. "Friendly" means to be kind, or "nice." A neighbor or buddy can socialize with someone but not necessarily be friendly. "Neighbor" and "buddy" are also nouns referring to people, and "socialize" is a verb; none are adjectives. A traitor is a person who wants to cause harm.

15. B. “Peak” is another word for “top.” A mountain has a peak, but “peak” only describes a small part of a mountain. “High” is an adjective, not a noun.
16. E. An oven is used to bake, so this is a uses analogy. Similarly, a rope is used to tie things. Though one may use a wheel to steer, the order is reversed from the original structure, and chocolate is a part of a brownie, so it does not have the correct analogy structure.
17. C. A dome is characterized as “round,” so this is a characteristic analogy. Similarly, a river can be described as “flowing.” Though also an adjective, “brittle” means “dry” or “breakable,” and would not be used to describe a river. “Water” and “stream” are both nouns, not adjectives.
18. D. “Continue” means to carry on, which is the opposite of “interrupt,” making this an antonym analogy. “Noisy,” and “silent” are also opposites. “Joyful” and “cheerful” are both positive feelings, so they are synonyms.
19. C. A blade, or knife, is often characterized as “sharp,” making this a characteristic analogy. Similarly, an arcade is characterized as fun. Although an onion may be described as “layered” and “buzz” can describe the sounds of a beehive, for both pairs the order is reversed from the original structure.
20. C. “Hideous” means “extremely ugly,” so this is a degree analogy. Similarly, “numerous,” which means “many,” is a more extreme version of “some.” Though a sprint is a more extreme jog, the structure is reversed from the original structure. “Valuable” is a synonym of “expensive,” and they do not differ in degree.
21. D. A cake is a type of dessert, which means this is a category analogy. Similarly, an inch is a type of unit. “Medium” is a type of size, but the order is reversed from the original structure.
22. B. A sponge is used to absorb, so this is a uses analogy. Similarly, a closet is used to store clothes. Though a closet is part of a bedroom, that is not the correct analogy structure. Similarly, a closet may contain shelves, but the word “shelves” does not demonstrate the purpose of the closet.
23. B. A strand is a part of a braid, making this a part/whole analogy. Similarly, a thread is one of many in fabric. In all the other options, though the words are still relating as wholes and parts, the order is reversed from the original structure.
24. E. A teacher uses a flashcard, so this is a users analogy. Similarly, an athlete uses a ball. Though a learner must think in order to learn, “thinker” and “learner” are both nouns describing people and neither are an object, so it is the incorrect analogy structure.
25. D. Sheep produces wool, so this is a product/producer analogy. Similarly, an author produces novels. Though a person uses yarn to produce a scarf, “scarf” is not a noun that describes a person.
26. B. “Exclaim,” or shout, is a more extreme version of “say,” so this is a degree analogy. Similarly, frigid is an overpowering cold. Though shivering indicates that one is cold and a refrigerator is cold, neither have the correct analogy structure.
27. E. “Hear” is pronounced the same way as “here,” making this a homonyms analogy. Similarly, “break” is pronounced the same way as “brake.” Though “tune,” “ear,” and “where” are associated with the question words, they are not related by homonyms.
28. D. A composer produces a song, so this is a product/producer analogy. Similarly, a bumblebee produces honey. A bear eats, rather than produces, honey.
29. C. “Tusk” is another word for “horn,” so this is a synonym analogy. Similarly, “pebble” is another word for stone. Though “dime” and “quarter” both relate to money, they are different units. “Unfair” and “fair” are antonyms.

30. A. "Spicy" is a strong taste, which is the opposite of "bland," or tasteless, so this is an antonym analogy. "Fasten," or connect, and "separate," or split apart, are also opposites. "Fasten," "join" and "link" are synonyms.

# Section 3 – Reading

1. E. *Inference.* The repeated line "I am the wind" (lines 1, 13) shows that the narrator is the wind. While a "child" (line 6), "flowers" (line 7), and "the tall wood" (line 15) are all mentioned the poem, they are mentioned to describe the actions of the narrator, who is the wind.
2. D. *Main Idea.* The poem describes the wind as both loud and fast (lines 2, 4, 9-10, 14, 16), and quiet and soft (line 5-8). This shows how the wind can change a great deal. All other answer options only support one characteristic of the wind instead of the many different characteristics of the wind described throughout the poem.
3. C. *Inference.* In the poem, the wind states, "Sometimes I am soft/As a sweet, gentle child" (lines 5-6), which shows how gentle and sweet the wind can be. In other stanzas, the poem does describe how loud the wind can be, but the lines from the question do not support its loud traits.
4. A. *Vocabulary.* The poet is contrasting how fast and loud the wind can be to how "quiet and mild" (line 8) it is at other times. The word "mild" (line 8) is also used to describe both a "child" (line 6) and the wind. The best opposite to loud and fast, that is also a human character trait, is shy. In the context of "quiet and mild" (line 8), "boring" has a negative connotation when the sentence is positive.
5. E. *Main Idea.* The author's main point is about pet adoption and the numerous good reasons to adopt a pet. Pet homelessness (lines 1-2), pet loyalty (lines 7-8) and the good habits they can teach children who care for them (lines 5-6) are all reasons/details given to support pet adoption, but they are not the Main Idea. Company for the elderly is also a supporting detail, but in this case pet adoption is recommended for "if they live alone" (line 7) rather than for all elderly people.
6. C. *Main Idea.* The author would agree that too many animals do not have homes; that is addressed in the first paragraph when the number of homeless animals is mentioned (lines 1-2). The author says that caring for pets will develop good traits in children (lines 5-6), but he does not say that it is hard work. Pet loyalty is a reason to adopt a pet, but the author never says that only dogs are loyal, nor does the author say that every human should have a pet. And though different pet species may be able to bond with one another, the author does not mention this. It is only stated that pets can bond with their owners.
7. D. *Vocabulary.* The idea that pets are "loyal, and will love their owners no matter what" (line 8) suggests that they are faithful and committed to their owners, as "faithful" is a synonym to "loyal." "Fond" means somewhat affectionate, and does not match the degree of love described. "Needy" has negative connotations, and suggests a demand for attention and care rather than an output of unconditional love. "Royal," though it sounds like loyal, had a completely different meaning of "related to kings." "Companion" is a noun and an adjective is needed here.
8. E. *Detail.* In the same paragraph that they talk about pets protecting their owner, the author states: "They will come to consider their owners as a part of their tribe or family" (lines 10-11). There is no mention of pets feeling that protection is their job, that they were trained to protect, that they are fearful of being alone or that they do it out of gratitude.
9. B. *Inference.* Since the boys need rags to tie to the kite, the passage implies that Raggedy Ann is a doll made of rags. A person, such as a sister, neighbor, or classmate, could not be safely "tied to the tail of the kite" (line 18). A pet would also be too heavy to be tied to a kite.

10. C. *Vocabulary.* Since the twine is tied to the kite, the passage provides evidence that it is a type of string. While paper and plastic could be used to build a kite, the boys would not be able to be "unwinding the ball" of these materials (line 5). "Ball of wax" is a common phrase, but there is no evidence to support the idea that twine is wax. The twine is tied to the front, and the rags are tied to the tail, showing that twine and rags are two separate things.
11. B. *Detail.* Right after the kite crashes, one of the boys says the kite "needs more tail on it!" (line 12), showing that this is the reason the kite crashed. The boys use rags as part of the tail, so rags would not prevent the kite from flying. Since the boys need to add more material to the kite, the passage shows that it is not too heavy to fly. The boys running and the wind are both reasons the kite flies, not a reason that it crashes.
12. B. *Inference.* Raggedy Ann is amazed that she "could see for miles and miles" (lines 21-22). She is not annoyed or frightened because the passage states that she "enjoyed being up there" (line 21). Although being attached to the kite helps it fly, Raggedy Ann did not volunteer, so she is not directly being generous. Since she is in awe of the view, Raggedy Ann cannot be described as relaxed.
13. C. *Main Idea.* The passage states "Doctors know that having a healthy diet isn't easy" (line 1) and "MyPlate can help people make better food choices" (line 4). Therefore, the passage is primarily about how MyPlate helps people eat healthier. The other answer options are supporting details, not the Main Idea. Also, the passage does not say that was should divide our food into sections, but rather that MyPlate does this to help people make better food choices.
14. E. *Inference*. Line 7 gives some examples of colorful vegetables, which will help us eat the rainbow. Since it recommended by doctors (line 6), we can infer that it is important to eat vegetables of different colors because those different colors provide different health benefits. Tomatoes, carrots and lettuce are not mentioned as the *only* colorful vegetables to be eaten. In the example, the vegetables are all naturally colorful, and there is no mention that we have to color them before eating.
15. D. *Detail.* Lines 5-6 explicitly state that "Vegetables and grains are the biggest sections on MyPlate. These should make up most of the food we eat." The author tells us to eat less of "fruits, proteins and dairy" (line 9-10), so fruits, milk, yogurt, meats and nuts are incorrect. The passage also says that potato chips and ice cream are not good for us.
16. A. *Vocabulary*. The passage states: "It is separated into four colored sections" (line 2). The verb "separate" implies that sections are created by dividing the whole, so a section is most likely a "part." We are told there are four sections, whereas "half" would suggest only two. It is also not mentioned that the separated parts are of a particular shape.
17. B. *Story Elements.* The main problem in the story is that Peter has trouble reading (line 9). Heidi does offer to help Peter read (lines 14-15). The story indicates Peter visits Heidi often (line 1). Heidi is shown to be supportive of Peter, not argumentative. Although Peter must read songs to his grandmother, this is a minor detail that supports the larger problem Peter faces of not being able to read.
18. C. *Inference*. In addition to having "flaming eyes," Heidi "planted herself before the boy," (lines 17-18) showing that she is determined. The phrase is being used metaphorically rather than literally, so it does not mean that Heidi is blind or on fire. Since she confidently and objectively describes the situation to Peter, she is not afraid or amazed.
19. E. *Vocabulary*. Heidi tells Peter that "nobody believes" him (line 10), which shocks Peter. Since Peter responds to her statements with resistance throughout the excerpt, he is not expressing joy or relief. While it is a difficult situation, the passage does not depict him as being afraid or angry at what Heidi tells him.
20. A. *Detail.* Heidi tells Peter that if he doesn't learn to read, he'll have to go to a "terrible, large boys' school" (line 20). Although the school is in Frankfurt, Heidi would not go with him. The

passage states that his grandma lives in Frankfurt, but he would live at a school, not with her. The school would have many teachers, as opposed to the one teacher Peter currently has (lines 21-22). The teachers, not the students, wear black hats at the school (line 23).

21. B. *Main Idea.* The first paragraph tells the readers that people hike "for many different reasons" (line 2), then lists those reasons in lines 3-7. The third and fourth paragraphs detail how people prepare for it. All of this information supports the main idea of why people hike and how to prepare for it. The other options are either false or merely cite supporting details from the text.
22. C. *Detail.* The article directly states: "the fresh air and warm sun can give you the energy you need to go back to work if you are feeling tired" (line 6-7). Though the indoors and work (line 7) are mentioned in the passage, they are not cited as reasons for hiking because people don't like them. Not being alone is suggested as something to avoid on a hike (lines 15-16). Boredom is not mentioned in the text.
23. D. *Inference*. The reference to what clothes to wear in all types of weather would best support the idea that hiking can be done in any season, or all year round. The other choices are details from other parts of the text but do not directly support the idea of year-round hiking.
24. E. *Inference*. The passage mentions "in case you get lost or need help" (line 16), and the need to bring snacks implies that there might not be ways to acquire food during the hike itself. One can infer that going hiking can be dangerous: having a map keeps you from getting lost, having a snack keeps you from getting too tired/hungry to continue to your destination, and bringing a friend means help in case something goes wrong. Some of the answer options address the question partially, but do not address ALL the details provided in the question.
25. D. *Main Idea.* The main focus of the passage is Pluto and how it is a unique planet (ex: being the smallest, the farthest away from the sun, etc). Even though Pluto's moon is Charon, the solar system is full of planets, moons and other objects, and plants orbit the sun, these are a detail rather than the Main Idea.
26. C. *Vocabulary*. "It takes one year for Earth to orbit the sun. It takes almost 250 years for Pluto to go all around the sun" (lines 10-11). Based on the comparative nature of these two sentences, we can infer that "orbit" means the same thing as to go around the sun. "Orbit" does not mean "pass," "fly," "stay," or "view."
27. E. *Detail.* Since Pluto and Earth are both planets, they both orbit around the sun. The other options are details that are unique to Pluto. Pluto takes 250 years to orbit the sun while Earth only takes one year. Pluto does not have living creatures, but Earth has an abundance of living creatures. Pluto is mostly icy and rocky, but Earth has water and land. Pluto is the furthest away, and Earth is the third planet from the sun.
28. C. *Detail.* We can assume that there is no life on Pluto because it is too far away from the sun. Since it is so far away from the sun, the planet is very cold and is mostly ice. It is not an environment where life can form. Even though the moon is only visible from one side, takes too long to orbit the sun, and is very small, these are not the reasons Pluto does not have life. Pluto is in fact a planet and not a moon.

# Section 4 – Writing Sample

Responses may vary. Have an experienced tutor or educator review the writing sample.

# Section 5 – "Experimental"

1. A. *Main Idea.* In line 6, the author states, "Field Mouse, I can see you pass," which shows that he is watching the field mouse. The poet is not hiding near the roots of tall trees; rather, the mouse is hiding there. Though the poet admires the field mouse's fur, he never touches it.
2. C. *Inference.* The lines "acorn tumbles down" (line 1) and the "ash tree sheds its berry" (line 2) hint that the poem takes place during autumn because these things fall to the ground in that season. Winter is discussed in the second stanza, but not the first.

3. D. *Detail.* In line 7, the word "dark" is used to describe the den, not the mouse. The mouse is described as "soft and brown" (line 3) and the mouse's eyes are described as "round and merry" (line 4).
4. E. *Inference.* This line shows that the mouse is so careful it scarcely, or barely, moves the grass. This phrase does not show hunger, unlike the line, "nibbling at their fallen fruits" (line 12).
5. C. *Vocabulary*. The previous line describes how an acorn "tumbles down," so we can infer that what is happening to the berry of the ash tree is similar. The closest word is "drops." A "shed" is a place to store or keep things, but in this case, the word "sheds" is not a plural noun, but a verb.
6. B. "Sturdy" means tough and solid, or "strong." An object may be sturdy without being hard. "Skinny," or flimsy, is an antonym.
7. B. To "attempt" means to make an effort, or "try." To "hesitate" means "to pause," and "tempt" means "to entice or lure." Neither are synonyms of "attempt."
8. E. To "predict" means to think something will happen before it does, or "guess." A "psychic" is a person that predicts what will occur, but it is a noun and not a verb. "Prevent" means to not allow an occurrence; it is an antonym of "predict."
9. D. A map is used to locate, so this is a uses analogy. Similarly, a banner is used to announce. Though tackle is used to fish, and a jar is used to contain things, the order is reversed from the original structure in both these options.
10. D. An instructor is a type of job, which means this is a category analogy. Similarly, January is a month. Though opera is a type of music, the order is reversed from the original structure.
11. D. *Geometry – Area and Perimeter.* The base of the triangle is 2 units and the height is 6 units. Area = $\frac{1}{2}$ (4 units × 7 units) = $\frac{1}{2}$ (28 square units) = 14 square units.
12. C. *Measurement – Time and Money.* When finding the length of time from given start and end times, first find the difference in hours. From 9:15 p.m. to 11:15 p.m., two hours have past: 11 – 9 = 2. Next, calculate the difference in minutes: 11:15 p.m. to 11:45 p.m. are 30 minutes apart: 45 – 15 = 30. Altogether, the show lasted 2 hours and 30 minutes.
13. D. *Measurement – Unit Analysis.* The prefix "kilo" means "one thousand," so a kilometer is equivalent to 1,000 meters. Since Jorja ran 2 kilometers, that is equivalent to 2 × 1,000 = 2,000 meters.
14. C. *Numbers – Arithmetic Word Problems.* To find how many yellow marbles are originally in the jar, subtract the number of red and blue marbles from the total: 100 – 43 – 39 = 18. Then add the new amount: 18 + 11 = 29.
15. D. *Statistics & Probability – Probability.* There are more slices with a plain cheese topping than any other type. Therefore, Kiley is most likely to end up with a plain cheese slice if she grabs it randomly.

# 4th Grade Final Practice Test (Form D)

## Section 1 – Quantitative

1. D. *Measurement – Unit Analysis*. There are 1,000 milliliters in 1 liter. Since we are converting from liters to milliliters, or a LARGER unit to a SMALLER unit, MULTIPLY the number of liters by 1,000 to find the number of milliliters of apple juice: 4.75 × 1,000 = 4,750.
2. E. *Numbers – Place Value.* The digit 5 is five places to the right of the decimal so it is in the hundred-thousandths place and is equivalent to $\frac{5}{100{,}000}$.
3. C. *Statistics – Mean*. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. Soren received a total of $215 for 5 items. Divide to find the average: $215 ÷ 5 = $43.

4. E. *Algebra – Equations and Inequalities*. First, find the value of *k* by adding 29 to both sides of the equation: *k* – 29 + 29 = 13 + 29 so *k* = 42. Then substitute this value into the second equation: 42 + 16 = 58.
5. D. *Numbers – Arithmetic Word Problems*. 48 Yellow Cab taxis times 2 equals 96 taxis. 96 taxis plus 4 taxis equals 100 taxis. (In number sentence form: 48 × 2 = 96 and 96 + 4 = 100.)
6. B. *Numbers – Ordering Numbers and Fractions*. First, rewrite 1 as $\frac{3}{3}$ and 2 as $\frac{6}{3}$. Since all denominators are now equal, place the fractions in order by numerator: $\frac{1}{3} < \frac{2}{3} < \frac{3}{3} < \frac{4}{3} < \frac{6}{3}$, which can be reduced to: $\frac{1}{3} < \frac{2}{3} < 1 < \frac{4}{3} < 2$.
7. B. *Geometry – Area and Perimeter*. The area of a square is equal to the measure of its side length times itself so 64 = S × S. The length of the side of the square must equal 8 units since 64 = 8 × 8. The width of each rectangle will be 8 units, and the length will be 4 units (half of 8 units). Perimeter is calculated by adding all the side lengths of a closed shape: perimeter = 8 + 4 + 8 + 4 = 24.
8. A. *Statistics & Probability – Probability.* Since two of the sides of the cube are labelled 1, and no other number is repeated, that is the number that will be most likely rolled.
9. C. *Measurement – Time and Money*. If practice started at 3:15 p.m. and he has been there for 25 minutes, it is 3:40 p.m. since 15 + 25 = 40. Next, find out how much time is from 3:40 p.m. until 4:30 p.m. In 20 minutes, it will be 4:00 p.m. and in another 30 minutes it will be 4:30 p.m. Add to find total time left: 20 minutes + 30 minutes = 50 minutes.
10. D. *Geometry – Shapes and Attributes*. This triangle has a right angle, which makes it a right triangle.
11. C. *Measurement – Time and Money*. Since Amy and Allen each have $2.00, they have $2.00 + $2.00 = $4.00 altogether. Subtract to find how much money is left over after buying candy. When subtracting money, remember to line up the decimal points. $4.00 – $2.80 = $1.20.
12. D. *Numbers – Basic Concepts*. In expanded form, 6,254 = 6,000 + 200 + 50 + 4 and 197 = 100 + 90 + 7. First, add the ones: 4 + 7 = 11. Next, add the tens: 50 + 90 = 140. Last, add the hundreds: 200 + 100 = 300. Find the sum of the place values: 6,000 + 300 + 140 + 11 = 6,451.
13. C. *Geometry – Shapes and Attributes*. A line of symmetry is a where you could fold the shape so both sides would match. The only line that does this is line C.
14. D. *Algebra – Ratios and Proportions*. To go from 5 to 25, we multiply by 5. But if we use this pattern and multiply 6 by 5, we get 30 which is not an answer choice. We must find another pattern. Since we multiply 5 by itself to get 25, we must multiply 6 by itself: 6 × 6 = 36.
15. E. *Numbers – Arithmetic Word Problems*. 412 oranges in the store minus the 268 oranges sold equals 144 oranges left: 412 – 268 = 144.
16. D. *Numbers – Ordering Numbers and Fractions*. Of the given answer choices: 1 and $1\frac{1}{4}$ are both less than $1\frac{1}{2}$ so they are incorrect; $1\frac{1}{2}$ is incorrect because Nika needs MORE than $1\frac{1}{2}$ cups, so she can't have exactly that amount; and 2 is incorrect because Nika needs FEWER than 2 cups, so she can't have that exact amount. $1\frac{3}{4}$ is the only choice that is more than $1\frac{1}{2}$ and less than 2.
17. A. *Statistics – Mean*. Average is calculated by adding all values in a set and dividing the sum by the number of values in the set. Chris ran 21 + 28 + 3 + 42 + 21 + 17 = 132 yards in her 6 games. Divide to find the average: 132 yards ÷ 6 = 22 yards.

18. C. *Geometry – Area and Perimeter*. The base of the triangle is 4 units and the vertical height is 6 units. Area = $\frac{1}{2}$ (4 units × 6 units) = $\frac{1}{2}$ (24 square units) = 12 square units. We do not need the diagonal lengths of 5 for this problem.
19. B. *Measurement – Unit Analysis*. There are 16 ounces in 1 pound. Since we are converting from ounces to pounds, or a SMALLER unit to a LARGER unit, DIVIDE the number of ounces by 16 to find the weight of the dog in pounds: 480 ÷ 16 = 30.
20. D. *Numbers – Fractions*. Convert the mixed number to an improper fraction. $2\frac{1}{2} = \frac{2 \times 1 + 1}{2} = \frac{5}{2}$ and rewrite 8 as $\frac{8}{1}$. Multiply to solve: $\frac{5}{2} \times \frac{8}{1} = \frac{5 \times 8}{2 \times 1}$. This simplifies to $\frac{40}{2}$, or 20.
21. C. *Numbers – Fractions*. When multiplying fractions, multiply the numerators and denominators: $\frac{3}{4} \times \frac{5}{8} = \frac{3 \times 5}{4 \times 8}$, which simplifies to $\frac{15}{32}$.
22. D. *Statistics – Interpreting Tables and Bar Graphs.* 22 percent of applicants are from the Bronx and 26 percent are from Queens. Add to find the percent from the Bronx or Queens: 22 + 26 = 48.
23. E. *Statistics – Interpreting Tables and Bar Graphs.* Manhattan and Queens together had 18 + 26 = 44 percent of applicants which is more than the other pairs of boroughs listed: Bronx and Staten Island had 31 percent of applicants; Brooklyn and Staten Island had 34 percent of applicants; Bronx and Manhattan had 40 percent of applicants; and Brooklyn and Manhattan had 43 percent of applicants. Brooklyn and Queens would add up to the most (25 + 26 = 51), but that is not offered as a choice.
24. D. *Algebra – Solving Equations and Inequalities*. This is the only scenario that would require subtraction (12 – 4 = 8), and not division.
25. B. *Numbers – Arithmetic Word Problems*. 115 total people divided by 5 people per car equals 23 cars. (In number sentence form: 115 ÷ 5 = 23)
26. D. *Algebra – Ratios and Proportions*. Each triangle represents 300 people. This means we can multiply the number of triangles by 300 to find the number of people. Since there are 4 triangles, there are 300 × 4 = 1,200 people.
27. B. *Numbers – Basic Concepts*. The 0 in the ones place tells us 630 is a multiple of ten. 63 ÷ 9 = 7, so 630 ÷ 9 = 70.
28. D. *Numbers – Arithmetic Word Problems*. 108 tons of gravel divided by 6 tons of gravel per truck equals 18 trucks. (In number sentence form: 108 ÷ 6 = 18)
29. E. *Statistics & Probability – Probability.* There are four even numbers: 2, 4, 6, and 8. There are four odd numbers: 1, 3, 5, and 7. There are four prime numbers: 2, 3, 5, and 7. There are three composite numbers: 4, 6, and 8. There are only two numbers greater than 6: 7 and 8. Since there are fewer numbers greater than 6 compared to the other categories, it is least likely to be occur.
30. B. *Numbers – Fractions*. When denominators are not equal, use the least common denominator to find equivalent fractions. The least common denominator is 12: $\frac{7}{12} - \frac{1}{6} = \frac{7}{12} - \frac{1 \times 2}{6 \times 2}$. This simplifies to $\frac{7}{12} - \frac{2}{12} = \frac{5}{12}$.

# Section 2 – Verbal

1. B. “Magically” means it was accomplished as if by magic, or “fantastically.” By adding the suffix “-ly” to the adjective “magical,” it forms an adverb. “Incredible,” may be used to describe magical

things, but is not necessarily limited to things relating to magic. “Awfully” means “badly” or “poorly,” and is an antonym.

2. D. A “strategy” is a “plan” for a series of actions to accomplish a goal. Though a strategy helps one succeed, or achieve success, “succeed” is a verb and not a noun. A “victory,” or win, may result due to good strategy, but it is not a synonym.
3. E. A “fable” is a type of fictional story, or “tale.” Though “moral” and “lesson” are synonyms, they are only one element of a fable.
4. C. “Convert” means to turn to a different thought, use, or purpose, or to “change.” We can convert cash into another form of currency, and we can convert beliefs, or views; but both “cash” and “beliefs” are nouns and not verbs.
5. D. “Reliable” describes something that can be trusted, or “dependable.” We may trust a reliable person, but “trust” is a verb and not an adjective. “Random,” or unpredictable, is an antonym.
6. E. A “voyage” is an act of traveling, or a “journey.” Although a ship and crew can take a voyage, and we use roads to journey, these are all associations rather than synonyms.
7. B. To “distract” means to draw attention away, or “sidetrack.” The suffix “dis-” means “away” and the root “tract” means “to draw,” which makes “distract” mean “to draw away.” Although “distinct” has the same prefix, it means easy to see or hear, so it is not a synonym. “Focus” and “emphasize” mean “to bring attention towards,” which makes them antonyms of “distract.”
8. A. “Hilarious” means extremely “funny.” The root “hilar” means cheerful, and the suffix “-ous” means “full of,” which makes “hilarious” mean full of cheer. We giggle when we find something hilarious, but “giggle” is a verb, not an adjective. “Bland” means boring, which is an antonym of “hilarious.”
9. C. To “creep” means to move slowly, or “crawl,” usually close to the ground. Sometimes if someone is odd or “weird,” we consider him or her *creepy*, but that is an adjective, not verb. To skip means to bounce or hop in the air, which is an antonym of “creep.”
10. A. A “revolt” is a rise against authority, or a “rebellion.” A “revolt” is specifically a fight against authority, and is not synonymous with all fights. “Unite” means to come together, so it is an antonym.
11. B. A “guardian,” guides, protects, and defends another person, or acts as a “protector.” Even though an angel or helper play helpful roles, they do not have the same connotation as “guardian,” which implies full protection and not just help. A “ward” means dependent, which is an antonym.
12. D. A “myth” is a fictious and traditional “story.” “Magic” and “gods” are words commonly associated with myths, but they are not synonyms. A nonfiction story will only include facts, which is an antonym of “myth.”
13. B. To “preserve” means to maintain, or “save.” We may care about something and therefore try to preserve it, but preservation is only one means of caring for something or someone. To “outlast” means living longer with no special care or maintenance, so it would be an antonym of “preserve.”
14. D. To “taunt” means to mock, or “tease.” Though taunting others may be seen as abominable, or terrible, to some, abominable is an adjective and not verb. When we give someone “praise,” or applause, it is the opposite of “taunt.”
15. E. “Identical” means one and the same, or “alike.” “Twin” refers to people who look the same, whereas “identical” may refer to any category of people or things. “Differ,” or vary in some way, is an antonym of “identical.”
16. C. A person’s baggage may be characterized as “heavy,” so this is a characteristic analogy. A “porcupine” is “prickly.” None of the other options would characterize a “porcupine.”
17. D. “Desire” is another word for “want,” so this is a synonym analogy. Similarly, “hopeless” is another word for “despairing.” In all the other options, the word relationships are antonyms.

18. C. Soccer is a type of sport, so this is a category analogy. Similarly, a villain is a type of character. Though a panda is a type of mammal, the order is reversed from the original structure.
19. A. An illustrator creates, or produces, a picture, so this is a product/producer analogy. Similarly, a scientist produces an experiment. Though a beaker may be related to an experiment, it is not the product.
20. D. "Seam" is pronounced the same way as "seem," making this a homonyms analogy. Similarly, "principle" is pronounced the same way as "principal." Though "school" and "headmaster" are words associated with "principle," they are not homonyms.
21. A. A cave may be characterized as "dark," so this is a characteristic analogy. Similarly, "garbage" may be described as "foul," or stinky. Though a forest is shady, the order is reversed from the original structure. "Complaint," or criticism, is the opposite of praise, so they are antonyms.
22. C. "Steaming" means "extremely hot," while "lukewarm" means "barely warm," so this is a degree analogy. Similarly, "exquisite," or extraordinarily lovely, is a more extreme version of "nice." Though "scorching" is a more extreme version of "hot," the order is reversed from the original structure. All the other options are synonyms, with no difference in degree between the two words.
23. E. A nurse uses a thermometer, so this is a users analogy. Similarly, a driver uses a taxi. A cab is a synonym of taxi, so it is not the correct analogy structure. A salesman *may* use a taxi, but it is not a tool of his trade, so it is not the correct analogy structure.
24. D. "Basic" means "undeveloped," which is the opposite of "advanced," making this an antonym analogy. "Grubby," or dirty, and "spotless" are also opposites. Though "easy" and "simple" are associated with "basic," they are synonyms. "Pretty" and "attractive" are also synonyms.
25. A. A dungeon is part of a castle, making this a part/whole analogy. Similarly, a handle is a part of a suitcase. Though a "sill" is part of a window, and a screen is a part of a television, the whole is mentioned before the part, making the order reversed in both pairs from the original structure.
26. B. A newspaper is used to inform, so this is a uses analogy. Similarly, a cart is used to transport. Though one may use stairs to climb and a saucepan to cook, the order is reversed from the original structure.
27. C. An actor uses a costume, so this is a users analogy. Similarly, a secretary uses a phone. Drama is an element of theatre, but that is not the same analogy structure.
28. E. A publisher produces books, so this is a product/producer analogy. Similarly, a lawyer produces a contract. A reader reads but does not produce fairytales, and the order is also reversed from the original structure.
29. B. "Which" is pronounced the same way as "witch," making this a homonyms analogy. Similarly, "suite" is pronounced the same way as "sweet." The word pair "lean" and "sheen" are not homonyms, but are instead related by rhyming.
30. E. "Envious" is another word for "jealous," so this is a synonym analogy. Similarly, "explain" is another word for "elaborate." Though one may "learn" when another "explain[s]," they are not synonyms.

# Section 3 – Reading

1. B. *Main Idea.* The author states that "zoos of today are different from the zoos of the past" (line 15), and also explains that "modern zoos are much better" (line 3). Examples include improvements in the cages (lines 5-7), saving endangered animals (line 7-9), and educational programs (lines 10-14). While the author discusses the role of zoos in saving animals (lines 8-9), this is a supporting detail rather than the Main Idea.

2. A. *Vocabulary*. The phrase "tight cages" (lines 5-6) hints that the animals might be "crowded." The answer cannot be "freed," because of the reference to cages. Since the sentence supports the idea of modern zoos having more space for the animals (line 5), words like "released," "fed" and "captured" would not be relevant.
3. E. *Detail.* In lines 5-8, the author explains that "Modern zoos… are designed to look like an animal's natural home… because these zoos are trying to save certain animals." While zoos are used to teach children (lines 10-14), the design change was mentioned in the context of saving the animals.
4. C. *Inference*. The passage explains that "golden frogs have died out in some places in the world [and] many zoos still raise them to keep the species alive" (lines 8-9). This shows that the golden frogs are in danger of dying out completely. There is no mention of whether or not they are poisonous, popular, or an importance topic of study.
5. B. *Main Idea.* In lines 1-2, the author calls the shore vacation her "favorite," and she spends the rest of the essay explaining why this was so. The genre of the piece is narrative and not persuasive, so she is not attempting to convince her audience to vacation down the shore or to spend time with their cousins. And although the narrator discusses how special her cousins are to her, she does not discuss them individually. Nowhere does the speaker say it is ill-advised to swim in the ocean.
6. A. *Inference.* Early in the paragraph, the author says that her parents "gave us kids a little more freedom" by the shore (lines 6-7). Being able to walk alone or stay until dark are supporting details to this idea. Though her parents are relaxed, the examples mentioned are not the cause.
7. D. *Detail.* In the third paragraph, the narrator says that with her cousins she buried people in the sand, hunted for treasure, competed in sand castle building competitions and shared secrets (lines 16-18). The game of I Spy was played in the car with her siblings on the drive down to the shore (line 3), and not with her cousins.
8. C. *Vocabulary*. The narrator tells us that the she and her cousins "played pranks on the adults" (line 18). That means they played jokes intended to fool or trick the adults, so "tricks" is the word with the closest meaning. Though one can play music and hooky, these do not make sense here in reference to the adults. And though the cousins play games amongst themselves, playing a game "on" the adults does not make sense in context.
9. D. *Main Idea.* This passage tells the life story of Beverly Cleary from her time in school through her career as a writer, including events like her childhood experiences with reading (lines 5-10), her first job (line 12), and her first publication (line 12-13). It talks about her work as a librarian and the honors she received, and it names some of her famous books, but these are details rather than what the passage is mainly about.
10. A. *Vocabulary*. In line 6, the passage says that Beverly was placed in the lowest reading circle at school. Lines 6-7 tell what she learned and read there. The word that best describes a place where learning happens is "class."
11. D. *Detail.* In lines 18-19, the passage directly states: "The best honor for a writer is being remembered and loved by readers." Though she had a school named after her (lines 16-17) statues made in her honor (line 17) and a long writing career (line 13-14), these are all cited as less important than being loved by readers.
12. B. *Inference.* Someone who sticks to pursuing their dream in the way Beverly Cleary did is *committed* to that dream: "The stories she had to read were too simple. It made Beverly feel bad about herself. But Beverly didn't give up" (lines 7-8). Beverly may be a gentle and peaceful person, but there is no evidence in the passage for it. Based on the passage, it is not correct to say she is either weak (she demonstrated strength when she didn't give up on reading as a child) or unrewarded (she received many honors and rewards later in life).
13. A. *Main Idea.* The bluebird prays for the snow to melt (line 11) and repetitively exclaims, "Summer is coming and Springtime is here!" (lines 10, 16), which shows that the poem is about

getting excited for the end of winter and the beginning of springtime. The winter skies are described as "dreary" (line 3), not beautiful and cheery.

14. C. *Vocabulary*. The author hints that the word "dreary" (line 3) might be the opposite of the bluebird's heart, which is "so cheery" (line 4). Since "cheery" means "happy," as its opposite, "dreary" must mean "gloomy" and dark. Students can also use their background knowledge of winter to know that winter skies can be gloomy. Thus, it is the opposite of "cheery," "sunny," or "bright."
15. E. *Detail.* The skies, which are "dreary" (line 3), represent winter, not springtime. All other nature references listed are used to describe the fact that springtime is here.
16. B. *Inference*. The phrase appears in the line that states, "Bright yellow flower! Come, open your eyes" (line 12), which shows the bluebird is speaking directly to the flowers, asking them to bloom. While the poem does reference the coming of summer, the bluebird is not talking to people in this case. Also, it is figurative language, and not meant to be read literally.
17. D. *Main Idea.* The author states: "If kids are tricked into eating junk food, this is not fair" (line 18), and discusses how many countries other than the U.S. have laws "to protect children from these ads" (lines 14-15), implying that she believes the U.S. should implement such laws as well. The passage is not focused on all ads, educational programming, or how much TV children watch generally.
18. B. *Detail.* Prior to the statement "Most young children do not realize that ads are not always true" (lines 6-7), the author explains that "Kids' brains take many years to grow" (line 6). The order of the two sentences implies causality. The author does not state or imply that children are not smart enough to see through the manipulative nature of ads, and instead is arguing that it is the responsibility of lawmaking adults to "protect" children from them.
19. E. *Inference.* The author mentions the music and colors of ads to explain why kids like the ads (lines 8-9), and are therefore duped by them. The colors and music do not make the ads untrue, nor do they cause children to become obese.
20. C. *Inference*. The author argues that advertising for children in TV should be regulated; therefore, she thinks ads are "problematic." The root word "problem" hints at a negative meaning, whereas "healthy," "necessary" and "beneficial" are all positive words, and contradict the main claim.
21. E. *Detail.* Greywhiskers' mother forbid him from putting his nose above the ground because the people might try to catch him (lines 5-6). Greywhiskers assumed he could take care of himself, but his mother did not comment on her opinion of this. She also didn't forbid him because of unpleasant smells, delicious food, or not wanting him to grow up.
22. C. *Vocabulary.* The word "scorn" is being used to describe Greywhiskers' reaction to his mother's warning. Since he then disobeys his mother, we can infer that Greywhiskers disagreed with his mother, and is therefore reacting with "dislike." The only other word with negative connotations is "heaviness," and his eagerness for action shows that he is not feeling depressed or "heavy" about her comment.
23. B. *Detail.* Greywhiskers wanted to prove that he did not have to follow his mother's tail his whole life (line 7), and did this by disobeying her and going to the pantry alone (lines 8-10). Greywhiskers did not find the wooden house until after he went to the pantry. Even though he might have wanted to eat delicious food or meet the people, this is not the main reason he went to the pantry.
24. A. *Inference*. We can assume that Ethel freed Greywhiskers because she felt sorry for him. Even though he ate her cake, tears came to her eyes when the cook said he was going to drown Greywhiskers (line 18). Also, the passage says that Ethel was tenderhearted (lines 21-22). The cook did not tell Ethel to free him, and she was not angry at the cook. There is no evidence that Ethel wanted him as a pet or for Greywhiskers to eat cheese.

25. D. *Main Idea.* The passage tells about the Watts Towers (lines 1-4) and how Rodia built them (lines 6-13). Although the passage explains what was used to build the towers (lines 6-10), it does not provide direct instructions. The passage never directly tells why Rodia built the towers. While it does mention that Rodia lived in Italy prior to coming to the U.S. (line 5), and that art classes are offered at the Towers (lines 17-18), it does not go into detail on either of these topics.
26. A. *Inference*. The passage indicates Rodia used material he either found or brought home from work for free. Much of the material was damaged (lines 9-10). He worked at a pottery store but did not buy material from there. Although the towers look like upside down ice cream cones, this does not describe the material. The passage also shows that Rodia used colorful materials (line 8), while mortar is a beige/gray color.
27. C. *Inference.* Rodia called the towers Nuestro Pueblo, or "our town" (line 14), which implies a sense of community. He used seashells, but that was only one of many eclectic materials, and there is no evidence that the tower was meant to represent the beach. He left the tower to be with his family, but never suggested that they inspired the towers. Even though he came from Italy, he was interested in his local community. Also, Rodia built the towers by himself.
28. B. *Detail.* The passage states that Rodia had to wear a belt because the towers grew, and he "had to climb them to keep working" (lines 11-12). His towers had glass, but not windows, and the glass is not shown to be washed in the passage. Although he added many different objects to the tower, the passage does not state that he added the belt.

# Section 4 – Writing Sample

Responses may vary. Have an experienced tutor or educator review the writing sample.

# Section 5 – "Experimental"

1. C. *Main Idea.* In the concluding sentence, the author states that Sojourner Truth's "speeches show how many people who wanted to end slavery also fought for the equality of women" (lines 13-14). While the passage discusses how Truth "was freed from slavery" (line 1), it is mainly focused on how people, like Truth, cared about ending slavery and fighting for women's equality. There is no mention of pay for either gender.
2. A. *Main Idea.* In her speech, Truth claims "I *am* equality…I can do as much work as any man," (line 6-7) and gives several examples of how she can work as hard as men (lines 6-9), using her personal experiences to prove her larger point. She does not, however, claim that women are *better* than men.
3. E. *Inference.* Truth states that she "plowed and reaped and husked and chopped and mowed the fields" (lines 7-8), which alludes to the work of a farmer. There are not any references to other jobs.
4. C. *Vocabulary.* The author is trying to show that few people talk about this part of her beliefs because few people know about it. The word "argue" does not work because it is about knowledge and not debate.
5. A. *Detail.* This phrase introduces the topic of women's equality, but it does not support arguments about women's equality. All other examples support the claim by showing how women can do as much as men.
6. B. *Inference*. Her determination is highlighted in her willingness to "[fight] for all slaves to be free" (line 1-2). She is certainly not "passive" or "weak," since she actively fights for others. Though she may be honest, this is not discussed in the text.
7. B. "Minimum" means smallest amount, or "least." Something may be relatively lower, or less, than something else, but that does not necessarily mean it is the smallest amount possible. The "maximum," or largest amount, is an antonym.

8. A. "Equivalent" means alike in value, or "equal." "Related" means similar or connected, but not necessarily the same. "Parallel" describes things that are side-by-side that do not touch, and is not a synonym.
9. E. A frontier (or beginning of wilderness) may be characterized as being "unknown," so this is a characteristic analogy. Similarly, vinegar may be characterized as being "sour." Though a burrow may be described as "cozy" and an animal may appear "shaggy," the order in both options is reversed from the original structure.
10. C. A broom is used to sweep, so this is a uses analogy. Similarly, money is used to purchase things. Though medicine is used to heal, the order is reversed from the original structure. Math and science may be commonly associated, but both words in the pair are nouns, so they do not follow the correct structure.
11. D. A mayor uses a podium, so this is a users analogy. Similarly, a butcher uses a knife. Though a judge uses a robe and a politician uses a speech, the order is reversed from the original structure.
12. C. An architect designs a building, so this is a product/producer analogy. Similarly, a designer designs clothing. Though a doorman produces greetings and an electrician may produce wiring, in both analogies the order is reversed from the original structure.
13. D. *Measurement – Time and Money.* As a decimal, 92¢ = $0.92. Add the 3 amounts to find their total. When adding money, remember to line up the decimal points. $2.43 + $1.67+ $0.92 = $5.02.
14. B. *Geometry – Shapes and Attributes.* A rectangle is a quadrilateral with four right angles. Choice B is a parallelogram and a quadrilateral, but it does not have right angles, so it is not a rectangle.
15. A. *Numbers – Ordering Numbers and Fractions.* First, convert the numbers from word form to standard form: nine million = 9,000,000; five hundred thirty-two thousand = 532,000; eighty-nine = 89; twenty-two thousand = 22,000. Then, order from least to greatest: 89; 22,000; 532,000; 9,000,000.